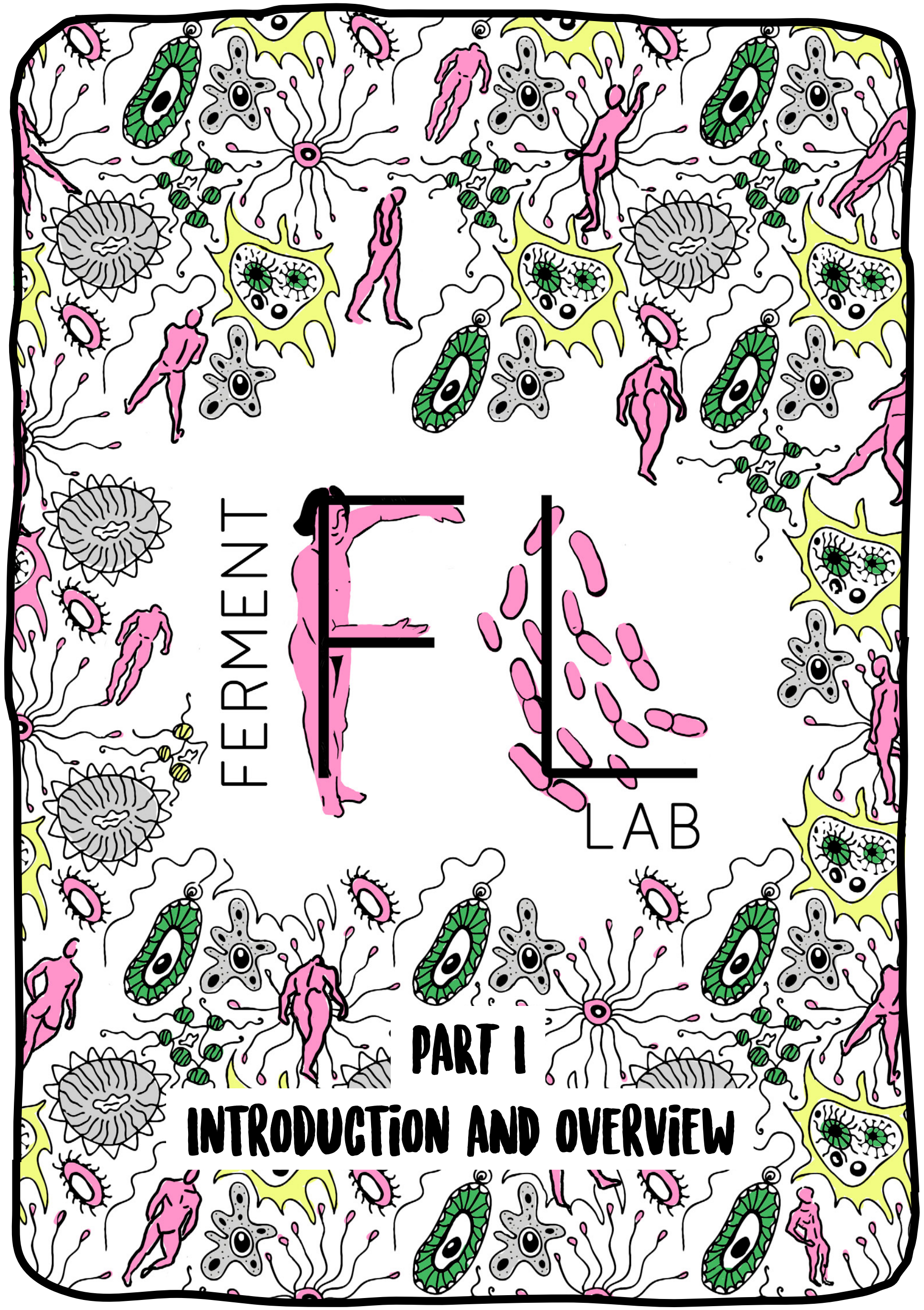

FERMENT FL LAB

PART I

INTRODUCTION AND OVERVIEW

FERMENT LAB STRASBOURG ZINE I

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Ferment Lab Zine series contain overall 5 parts:

I Ferment Lab introduction & overview
II Ferment Lab workshops, pop-up space, and multipliers
III Krütt Trepple Dance Party
IV Personal experiments in art-science
V Strasbourg Laboratoire de Demain exhibition & Reflections

The content of all zines was produced by Agnieszka Pokrywka, Andrew Gryf Paterson and Nathalie Aubret during Pixelache's artistic residency during 2017 at Le Shadok, digital-maker culture centre in Strasbourg, France. Zine 'Part 2' especially includes the work and media of workshop participants and collaborators. All parts were prepared for the different 'atlas' phases of the 'Strasbourg: Laboratoire de Demain' exhibition (10 October 2017- 21 January 2018) in the same location.

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All drawings and pictures in this zine are made by Agnieszka Pokrywka, unless indicated differently.

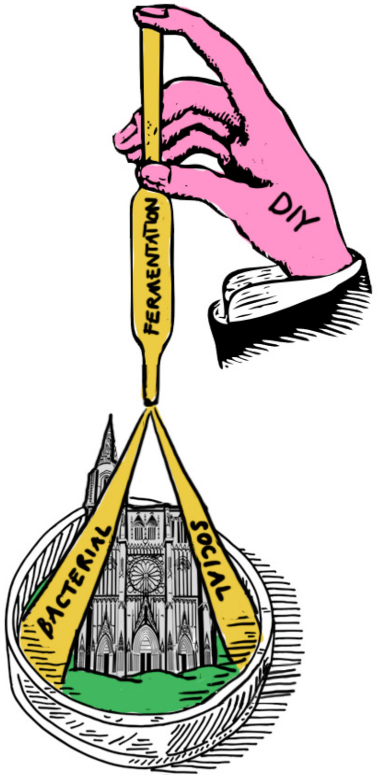
#FERMENTLAB #STRASBOURG

Archive.org
https://archive.org/details/@fermentlab-pixelache

Shadok
www.shadok.strasbourg.eu/projets/ferment-lab/

Facebook
www.facebook.com/groups/fermentlab.strasbourg/

Pixelache
www.pixelache.ac/projects/ferment-lab



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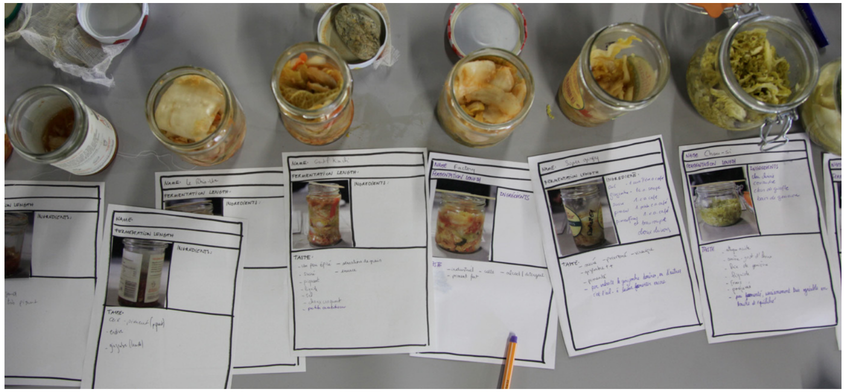

INTRO

This zine is produced to share our example of imagining and starting a ferment lab. A ferment lab is a social space that can be actually physical, such as the corner we worked at in Shadok, or conceptual as in the group of people who experiment together with fermentation. In our Ferment Lab Strasbourg, we focused on exploring how it is possible to develop that social space in a context like Strasbourg, and in particular focused on vegetable fermentations and Choucroute, rather than other equally famous local fermentation products such as wine, beer, cheese. We share here a collection of documents from our process, including some images, texts, illustrations by workshop participants, and other aspects of our cultural production.

Ce zine fut créé pour partager notre exemple d'imagination et de création d'un ferment lab. Un ferment lab est un espace social, qui peut être physique, comme le coin où nous avons travaillé au Shadok, ou bien conceptuel: un groupe d'individus qui expérimentent ensemble la fermentation. Dans notre Ferment Lab Strasbourg, nous nous sommes concentrés sur comment il était possible de développer un espace social dans un contexte comme Strasbourg, en particulier autour de la fermentation des légumes et la Choucroute, plutôt que d'autres produits locaux de notoriété équivalente comme le vin, la bière ou le fromage. Nous partageons ici une collection de documents issus de notre processus, dont des images, des textes, des illustrations de participants des workshops, et d'autres aspects de notre production

WHAT IS FERMENT LAB?

Every cultural project needs a description, a summary and background story. The different aspects need to be described and covered. Who is involved, where does it take place, what will be done.. What is fermentation actually? What makes it a laboratory? Note that this text is probably for the 'connoisseur'.

Chaque projet culturel a besoin d'une description, d'un résumé et d'un contexte. Ces différents aspects doivent être décrits et couverts. Qui est impliqué, où cela se passe-t-il, ce qui sera fait... Qu'est réellement la fermentation ? Qu'est ce qui en fait un laboratoire? Il faut noter que ce texte est probablement adressé au "connoisseur".

Ferment Lab is a participatory space for food and social fermentation and has been an ongoing project of Pixelache since 2014 [1]. Pixelache is a cultural association based in Helsinki, and a transdisciplinary platform for emerging art, design, research and activism [2].

Fermentation is a natural process that man has learned how to master. It is a crucial element in making foods and beverages, to preserve it and enhance its taste and nutritional properties. In biochemical terms, it is a process that converts sugars present in foods, to acid, gases or alcohol, under the action of ferments (such as bacteria, yeast, mold). Most of the time this happens in anaerobic (oxygen-deprived) conditions.

Ferment Lab has taken various forms in its exploration of the phenomenon of fermentation. The project involves research and experimentation into food preparation, as well as into social interpretations of the concept. Overall Ferment Lab aims to be conducted in various locations in order to collect stories of food and social transformation, transplant gained recipes into other contexts, and create new knowledge and meanings through experiments in social fermentation.

Ferment Lab Strasbourg was proposed by Andrew Gryf Paterson, Agnieszka Pokrywka and Nathalie Aubret from Pixelache to Le Shadok [3] in May 2016 as an international artist residency from late February to early July 2017, ending in an exhibition of process, artefacts and outgoings as a contribution to the 'Strasbourg: Laboratoire à demain' (Laboratory of tomorrow) exhibition at Shadok, opening 10th October until January 2018.[4]

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[1] *http://www.pixelache.ac/projects/ferment-lab*

[2] *www.pixelache.ac*

[3] *http://shadok.strasbourg.eu*

[4] *http://www.shadok.strasbourg.eu/agenda/strasbourg-laboratoire-de-demain*

WHY FERMENT LAB IN ALSACE AND AT LE SHADOK?

** Le Shadok is Strasbourg-based cultural centre focused on digital maker culture.*

The reason for doing something somewhere is worth considering? Who are your cultural hosts? What is particular and special in a particular place, city or region, and how are you attracted to it? What can you bring that might start some social or actual fermentation?

La raison pour faire quelque chose quelque part doit-elle se poser? Qui sont nos hôtes culturels? Qu'est ce qui est particulier et spécial, dans un endroit donné, ville ou région, et comment y sommes nous attirés ? Que pouvons nous apporter qui pourrait démarrer une fermentation, sociale ou réelle?

Strasbourg and Alsace region is a relatively-densely inhabited agricultural area of Central Europe that has a deep and historically-long relationship to fermentation practices, traditions and innovations. It is widely-known for particular fermented specialties in the form of local varieties of wines, beers, cheeses, choucroute (sour-cabbage).

Historically it has also hosted significant scientists, who have led to important discoveries and developments that benefited the economy of the region. Most famous is the bio-chemist Louis Pasteur, who lived and worked in Strasbourg in the mid-1800s, whose research on fermentation led to the industrialisation of rural and agricultural practices through what was named after him as the pasteurization process. The effect of his work, and the work of his contemporaries, led to successful breweries and companies in Alsace during the Imperial German and French Republican periods of late 19th and early 20th Centuries.

Ferment Lab aims towards reinterpreting this rich heritage, and rejuvenate disappearing traditions through the example and use of grassroots approaches which encourages creative and civic contributions through hacking, digital fabrication, citizen science, DIY (do-it-yourself) and DIWO (do-it-with-others) methodologies.

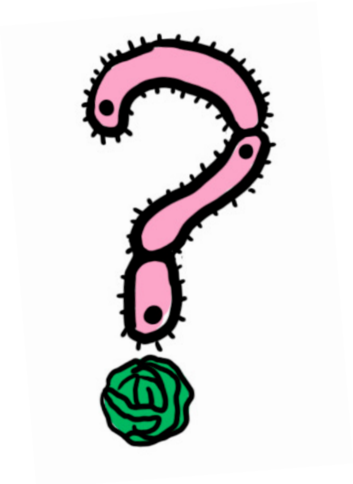
Those interests are aligned with Shadok's desire to be in a constant dialogue with various actors of the region and its ambition to be a space for experimentation, where things can emerge, develop and be shared. Le Shadok facilities as digital fabrication lab and it's co-curated exhibition 'Strasbourg Laboratoire de Demain' (Strasbourg: The Laboratory of the Future), from 10th October 2017 to 21st January 2018, created a perfect context for Ferment Lab processual developments.

QUESTIONS AND THEMES EXPLORED

What do we want to find out in the process of making Ferment Lab, that goes beyond the particular time and place of Strasbourg?

Que voulons nous découvrir dans le processus de création d'un ferment lab, qui va au-delà d'une situation temporelle et géographique précise comme Strasbourg?

- What is at stake in the act of fermenting and making our own bio-active, live foods?
- Can experimentation around fermentation and food hacking empower us, and is so, in what ways?
- Can reinterpretations of heritage around food practices and fermenting contribute to future thinking and actions?
- What can fermentation and its cycles teach us about life in general and about ourselves?
- Is there a relationship between food culture and local culture in general? What does it say about us?
- What could recipes for practical and social fermentation look like in the context of Strasbourg?
- Can we rethink systems of food security (eg. homogenization) and food production and reflect it in practice?
- Can food and its processes become a platform for a dialogue and collaboration between people of different disciplines, social status and cultural belonging?



METHODOLOGY

How can a Ferment Lab be developed? How would you encourage people to get involved? What cultural practices and associations can be engaged?

Comment un Ferment Lab peut-il se développer? Comment encourager des personnes à s'impliquer? Quelles pratiques et associations culturelles peuvent être mobilisées?

Simply we imagine the combination of methods or practices we have used to be: Artist cookbook; 'How To Do' instructions; 'Do it with Others' approach; Degustation tasting activity; Participatory arts & research; Everyday life and 'making-do' (with what you have got) practices; open process-based project; Art-science and bioart experiments; A strange and maybe fun approach to the familiar.

During the initial phase of the project from December 2016 until the spring of 2017, we were focussing on fermenting connections with local actors. We hoped that Ferment Lab would develop around a variety of collaborations, involving individuals, groups and organisations. We contacted and met a range of local people. As part of this approach, Ferment Lab was willing to share their residency space and time at Shadok with its collaborators, so the process can be sustained and on-going even when we are not present. Our residency approach involved coming for 1-2 week periods at different points over 6 months. We wished to encourage our partners to take ownership of the project and invite them to help us develop and look after it. We offered opportunities to lead workshops to some of the local contacts we met. However, this ambition was more difficult than we thought. We will comment on this in our 'Reflections' section later (Zine part V).

Ferment Lab's methodology also taps into the knowledge accumulated by Pixelache over time, in the field of participatory methods and practices in art production and research. As part of the project, a programme of participatory activities such as field trips, workshops and other experiments were co-designed and co-organised by 'Ferment Labbers' and its collaborators from February through October 2017. These events offered various entry points for more individuals and groups to get involved.

Learning by doing, and doing it with others, was a strong principle guiding Ferment Lab's activities. These approaches were particularly useful in the fabrication of tools supporting our processes (such as in the AV Fab Lab within the Shadok building) and fermenting itself. As methods, they encouraged public participation into 'food hacking' experiments to do pH testing and paper-making, and led us into reinterpretation of heritage and deconstructing traditions, individualisation of mass culture, rejuvenation and reappropriation of everyday life practices. For example, the making of Choucroute/Sauerkraut together with others introduced most participants to making it themselves, instead of purchasing pre-made version; a variety of non-conventional flavours; and a scaled-up performance of dancing on cabbage with bare feet!

We decided to use the popularly known formats of 'How To Do' tutorials and food recipes as a means to share practical methods, transfer and share the knowledge that was gained, as well as the capturing of our process (making a zine such as this one you hold). This type of representation also reconnects to the Strasbourg medieval tradition of artists' recipe manuscripts. [5]

WHAT WE HOPE THE PROJECT CAN CREATE/BRING/IMPACT

What we hope for in the process
Ce que nous attendons du processus

We see the project as an invitation into a transformative and hopefully empowering process. For this process to unfold, Ferment Lab set outs to open participatory/collective spaces for:

- exploration, sharing and re-appropriation of heritage and know-hows, in connection with local food culture/fermentation practices
- learning by doing and skill exchange around the making of our own live food
- experiencing a different social time and new kinds of interactions following life cycles of fermentation
- emergence of new social narratives engaging with the local food culture/fermentation
- co-designing events, recipes and the final exhibition with partners & participants
- initiation of new collaborations between local actors

The project aims to make the process shareable:

- by inviting the general public to come and observe fermentative processes, both biochemical and social
- by presenting our findings in a comparative manner in the form of an open source cookbook of food and social fermentation.

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[5] *http://recipes.hypotheses.org/407*

WHAT IS SOCIAL FERMENTATION?

This is a core concept in our Ferment Lab process. How does fermentation relate to social development, commons-oriented thinking, making, sensing and engaging?

C'est un concept au coeur de notre démarche de Ferment Lab. Comment la fermentation se rapporte au développement social, à une réflexion, une création, une perception, un engagement autour d'intérêts communs?

Agnieszka's viewpoint on social fermentation was largely inspired by the conversations with Luisa Greenfield from Biological Wisdom and Social Transformation [6], work of Sandor Katz [7] and Micro Cultures zine [8]. Based on all of those and her own experiences social fermentation could be explained in the following way:

Fermentation cultures are cultivated no less than plants and animals are cultivated, and for that matter no less than the socially transmitted behaviour patterns, arts, beliefs, institutions, and all other products of human work. After all words as subculture, agriculture or microculture are derived from the same core. Bacteria and humans and therefore bacterial and social fermentation (understood as a social transformation) are activated when the particular conditions are fulfilled involving an interplay between agitation, quiet observation and the qualities of the surrounding. Little by little those unremarkable conditions bring a change to dependent on the specific environment. That can mean longevity and taste of food or more active attitude of the social group. Both fermentations can keep going continuously and be propagated by repetition and variation if treated with care and intentionality. Each case generates a purer, more wholesome, and more vital condition of things. There are no strict recipes.

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[6] *https://www.facebook.com/groups/biologicalwisdom/*
[7] *http://www.wildfermentation.com/*
[8] *http://bbva.irational.org/microcultures/microcultures_zine/*

photo by Hérve Munsch

From the interview with Andrew by Dorothea Magnin:

Andrew: So you wonder what social fermentation is? Well I have to admit , it's not terms that I use very often, and not in an everyday life situation. But I can have a sense of what fermentation is, and maybe how that relates to the development of a social space or a community. So, a fermentation is setting up conditions for different elements to interact and grow, in this case, bacteria, at different paces. Then it's something which has unexpected outcomes, it can go in many different directions, but the initial arrangement is what starts things.
And in our case, in our process here, in Ferment Lab, we are trying to set up, or we're setting up social arrangements through doing things together, and in this case actually making ferments, to develop a sort of social space, maybe a temporary community, around Ferment Lab, and hopefully in the process, friendships and other relations, whether they're professional or not, which is with unexpected direction. You don't know where it's gonna go. For me this will quite a nice summary of what social fermentation could be.

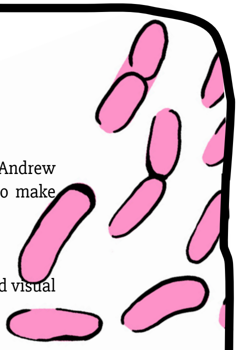
Do you have a synonym of social fermentation?

Andrew: Life?

How do you see social fermentation as a co-designed process?

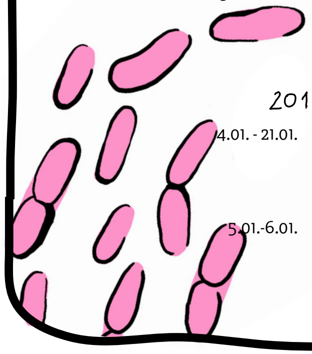
Andrew: Well, in our case we have actually set up situations where there is enough space for people to decide for themselves how they want to flavour things, to carry on with the metaphor, so the co-design is in the meeting between those who set up the elements and those who decide to make the most of these elements, according to their own flavour.

TIMELINE



2017

24.2. - 6.3.	Agnieszka Pokrywka, Nathalie Aubret & Andrew Paterson: How to make ferments and how to make Ferment Lab workshops.
10.4. - 11.4.	Hérve Munsch: workshop on fermentation and visual identity (version 1.).
21.4. - 24.4.	Agnieszka Pokrywka & Andrew Paterson: Krütt Trepple Dance Party (2nd Anniversary of Shadok).
28.6. - 6.7.	Andrew Paterson: Personal process on Bacterial Love Letters.
9.7. - 17.7.	Agnieszka Pokrywka: Personal process on different methods of bacteria sensing.
29.9. - 13.10.	Agnieszka Pokrywka & Andrew Paterson: finalization of residency processes & preparing exhibition.
10.10. / 11.10.	Opening of 'Strasbourg: Le laboratoire a demain' exhibition (Strasbourg: Laboratory of the future).
11.10. - 10.11.	The first part of the exhibition. Singularités plurielles: Appréhender demain à partir de regards multiples (Plural Singularities: Understanding tomorrow from multiple perspectives).
15.11. - 22.12.	The second part of the exhibition. Pluralités d'espaces: Développer de nouvelles relations avec la création (Pluralities of spaces: Developing new relationships with creation).



2018

4.01. - 21.01.	The third part of the exhibition. Espaces immunitaires: Déployer ses propres écosystèmes (Immune spaces: Deploying own ecosystems).
5.01.-6.01.	Hérve Munsch & Andrew Paterson: workshop on fermentation and visual identity (version 2.)

FERMENT LAB STRASBOURG BUDGET AND LABOUR

This section reflects upon the budget and labour involved. How much money and approximate working hours are necessary?

Cette section aborde le budget et le travail investi dans ce projet. Quel budget et combien d'heures de travail sont nécessaires?

In our Ferment Lab Strasbourg, we focused on vegetable ferments. This reduced raw material costs to that of seasonal vegetables and spice flavourings.

Hence little specialised equipment was necessary to make the ferments themselves. We do advocate you invest in good sharp knifes (15-30 EUR), and for large amounts of cabbage we recommend it can be done faster with larger graters or slicers (Râpe à choucroute, 25-40 EUR).

We argue that you can make Ferment Lab workshops primarily based on other low-cost or everyday kitchen items. Either those that are found 2nd-hand or can be sourced relatively cheaply.

For example, glass jars are best containers. You can keep or gather used ones, clean them with boiling water, cover with muslin cloth and easy to get weights. (We used non porous hard stones or other plastic or glass containers). But if wish you buy new ones, such those with rubber-seals and clamps which are ideal for longer ferments, costing approximately 1 EUR each in Western/Northern Europe. Larger containers and barrels cost more obviously. Are you making for just yourself, your household or community? And how long do you wish to store them for, 1-2 weeks or 3 or 6 months? Scale increases costs.

photo by Andrew Paterson

The majority of our material costs when to the Exhibition installation, and the Krutt Trepple Dance Party (which was a larger scale material event).

If you use digital tools such as laser cutter to illustrate lids like we did as a workshofp example, at AV Fab Lab at Shadok, we took membership and training for 30 EUR, and rented the laser-cutters for 5 EUR per 15 mins, the approximate amount of time to set up and print 1-5.

Important Note: Because Ferment Lab Strasbourg for us was an international residency project, A good amount of general costs (about 1/5 of total budget) involved travel, accommodation and per diems to be in Strabourg. It was also a professional project which included coordination and production fees (3/5 of total budget). If you are interested in these details, you can see the breakdown of expenditures [9].

Labour

From 14 October till 8 November Agnieszka has been working on Ferment Lab Strasbourg for at least 370 hours and since the process is not yet over it is still counting. From 14 October till 31 March Nathalie spent 165 hours on the project. It means that we've worked average of 1 hour per day during this whole period to make Ferment Lab ferment. Andrew's hours were not counted, and can only be guessed based on the amount of work he did.

We also had the support of Shadok staff and contract staff for curatorial advice, scenography, technical support, some communications in print or social media; and our financial administrator in Pixelache office, paying and reimbursing our costs or expenditures.

NB: We can't count the contributions of our bacterial cooperators, who number in their billions. We didn't count the amount of numbers of fermenting jars we've produced along this period besides the 4 barrels of choucroute making together around 80-100 kilos of fermented matter. What we can say, however, is that we could not do it without them!

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[9] *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-production-budget*

RELATED PROJECTS

AGNIESZKA

2015: Bacterial Fortunetelling (Taipei, Taiwan)
www.facebook.com/events/1503264623336691

2015: Spectroscopic kaleidoscope (Taipei, Taiwan)
http://selectionunderconstruction.tumblr.com/post/134900378323/spectrokaleidoscope

2015: Ways of seeing things: Xindian River (Taipei, Taiwan)
http://selectionunderconstruction.tumblr.com/post/167228651883/lasermicroscope

2015: Ferment Lab Linz (Linz, Austria)
http://selectionunderconstruction.tumblr.com/post/134898609898/incubator-unplugged-diy-candle-based-incubator
https://projects.stwst.at/stwst48/ferment-lab-by-agnieszka-pokrywka/

2014-16: How to start without start or how to make a yogurt without a yogurt and many other fermentation workshops (Dusseldorf, Germany and other places)
www.facebook.com/events/527001987485375/permalink/530761817109392/

AGNIESZKA – ANDREW

2016: Planet B: Food Hacking (Dusseldorf, Germany)
http://www.nrw-forum.de/en/exhibitions/planet-b
https://archive.org/details/planet-b-food-hacking_artefacts_audio-narratives
https://vimeo.com/170400561

ANDREW

2010: Herbologies/Foraging Networks (Aizpute, Latvia)
https://archive.org/details/agryfp-2010-herbologies-foraging-networks-kurzeme-expedition
https://vimeo.com/13094223

2010: Participatory Media Cultural Heritage workshops with SERDE (Aizpute, Latvia)
https://archive.org/stream/agryfp-2010-herbologies-foraging-networks-kurzeme-expedition/paterson-pucena_2013_SERDEs-Notebooks-of-Tradition-participatory-online-approaches_000413#page/n0/mode/2up

2015: Cultural Heritage as Resource text
https://archive.org/details/agryfp-2015-2008-serde-cultural-heritage-as-resource

photo shot taken during Planet-B

2015/16: Bacterial Love Letters workshops (Vilnius, Lithuania)
http://www.letmekoo.lt/naujienos/bacterial-love-letters-sent-from-malonioji-6/

2016: Contribution to 'The Body of the Letter' Exhibition (Vilnius, Lithuania)
https://archive.org/details/agryfp-2016-summer-contribution-to-the-body-of-the-letter-vilnius

ANDREW - NATHALIE

2013/14: Foodycle
http://www.foodycle.info/about/

NATHALIE

2012: Data Cuisine, with Susanne Jaschko (Helsinki Finland)
http://data-cuisine.net/workshops/open-data-cooking-workshop-helsinki/

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<*http://www.wildfermentation.com/the-art-of-fermentation/*>
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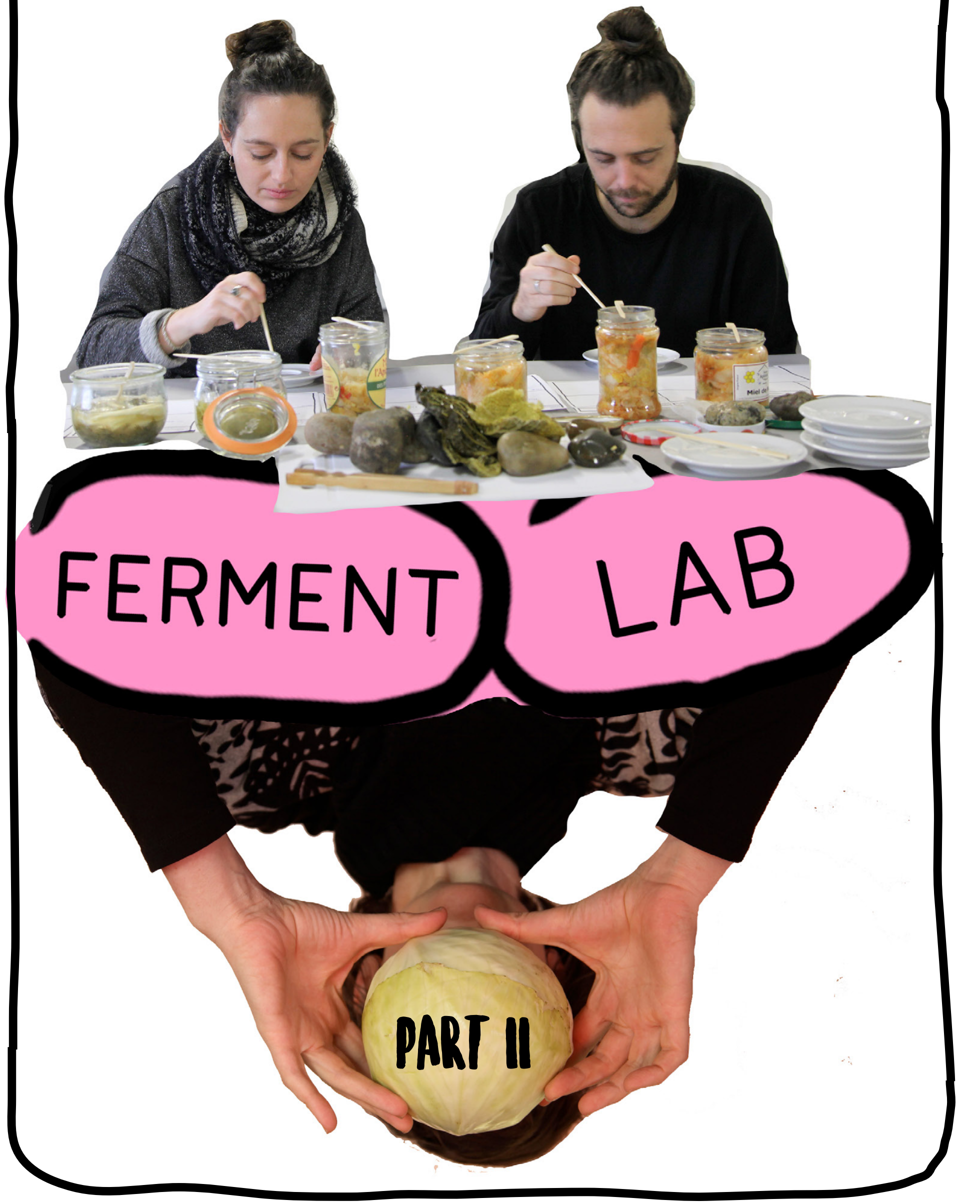
wild fermentation
Sandor Ellix Katz
The Art of Fermentation
NI CRU NI CUIT
Histoire et civilisation de l'aliment fermenté
Handbook of Indigenous Fermented Foods
Second Edition, Revised and Expanded
edited by
Keith H. Steinkraus
Handbook of Fermented Functional Foods
Second Edition
Edward R. Farnworth

WORKSHOPS, POP-UP SPACE AND MULTIPLIERS



FERMENT LAB STRASBOURG ZINE II

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Ferment Lab Zine series contain overall 5 parts:

I Ferment Lab introduction & overview
II Ferment Lab workshops, pop-up space, and multipliers
III Krütt Trepple Dance Party
IV Personal experiments in art-science
V Strasbourg Laboratoire de Demain exhibition & Reflections

The content of all zines was produced by Agnieszka Pokrywka, Andrew Gryf Paterson and Nathalie Aubret during Pixelache's artistic residency during 2017 at Le Shadok, digital-maker culture centre in Strasbourg, France. Zine 'Part 2' especially includes the work and media of workshop participants and collaborators. All parts were prepared for the different 'atlas' phases of the 'Strasbourg: Laboratoire de Demain' exhibition (10 October 2017- 21 January 2018) in the same location.

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All drawings and pictures in this zine are made by Agnieszka Pokrywka, unless indicated differently.

Ferment Lab Strasbourg is powered by

PI:·:ELACHE
SHADOK
FABRIQUE DU NUMÉRIQU
Taiteen edistämiskeskus
Centret för konstfrämjande
Arts Promotion Centre Finland

#FERMENTLAB #STRASBOURG

Archive.org
https://archive.org/details/@fermentlab-pixelache

Shadok
www.shadok.strasbourg.eu/projets/ferment-lab/

Facebook
www.facebook.com/groups/fermentlab.strasbourg/

Pixelache
www.pixelache.ac/projects/ferment-lab

THE TWO WORKSHOPS

The workshops here were the two opening public events of the Ferment Lab Strasburg, inviting locals to take part in learning some vegetable fermentation recipes, tasting and documenting the process together. Both workshops also helped give ideas and shape what Ferment Lab could be, what equipment is needed or useful, and what might be good to happen in the future.

Les workshops furent les deux ouvertures publiques du Ferment Lab Strasbourg, conviant des locaux à participer en apprenant des recettes de fermentation de légumes, goûtant et documentant le processus ensemble. Les deux workshops ont aussi aidé en donnant des idées et des formes à ce qu'un Ferment Lab pouvait être, quel équipement était nécessaire ou utile, et ce qui pouvait être bien d'organiser dans le futur.

drawing by Guillaume Bonnet

EQUIPMENT FOR BOTH WORKSHOPS

counted for 2 x 15-20 participants of workshops

- bench-tables (foldable, movable) which has space for 15-20 participants
- min. 20x chairs
- 10x medium-large size kitchen knifes, 10 x small size kitchen knifes
- 20x cutting boards (wood, plastic), some different sizes, smaller as well as larger
- 5L (or bigger) container/bottle for water
- 3x large transparent plastic containers (10-30L)
- 50x glass jars (2ndhand or recycled ideally) for individuals to take home their ferments or exhibit it in the Ferment Lab space
- projector (for workshop 2)

KIMCHI CHOUCROUTE WASTE

FERMENTATION

FANZINE

PETIT GUIDE DE LA FERMENTATION SOCIALE

POUR TOUS CEUX QUI VEULENT FAIRE BOUGER ENSEMBLE LE MONDE QUI LES ENTOURE

zine cover by Dorothea Magnin and Hakim Elhadouchi

META-DOCUMENTATION
HAKIM AND DOROTHEA CONTRIBUTION

Hakim Elhadouchi and Dorothea Magnin followed Ferment Lab Strasbourg during the first two workshops and also helped with some of the later processes. As a part of their master's degree specialized around education and new technologies they prepared this small zine on social fermentation. [1].

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[1] *https://archive.org/details/fermentlab-pixelache-2017-fanzine-fermentation-sociale*

WORKSHOP I
HOW TO MAKE FERMENTS TOGETHER?

Type: Food fermentation workshop
Date and time: 25-26.02.2017, 11-18
Venue: Le Shadok
Fee: Free

CALL FOR PARTICIPANTS

Most people eat and drink some form of fermented food and drinks. There are also many traditions and histories of fermentation in Strasbourg and Alsace, with beer, wine, cheese and choucroute being just the most obvious ones. Ferment Lab aims at exploring and remixing this local heritage, and adding new layers to it to bubble up with your help.

If you are curious about fermentation, maybe looking for inspiration to get started, or already making your own ferments at home, this workshop is for you!

Join us at Shadok on the weekend of 25-26.2 to explore what fermenting together can mean. We will focus entirely on cabbage. Kimchi, choucroute and cabbage's waste parts fermentation recipes will be performed by Andrew, Nathalie and Agnieszka respectively. We would be delighted if some of you also want to share your recipes at the end of the introductory workshops.

A collective documentation method of the workshop will be introduced, which you can all take roles in according to self-defined skills, interests and equipment.

New recipes, some actual ongoing-fermenting delicacies (they won't be ready yet), and perhaps new friendships are amongst the things you can take home at the end of the weekend!

This workshop weekend launches Ferment Lab's residency at Le Shadok over 2017, the project initiated by Andrew Gryf Paterson, Agnieszka Pokrywka and Nathalie Aubret. It will culminate in a contribution to the 'Strasbourg: Laboratory of the Future' exhibition inhouse in October 2017. Other fermentation workshops will be announced during the spring season.

No prior knowledge of fermentation is needed to participate.

photo by Andrew Paterson

WORKSHOP SCHEDULE

Day 1

1. Icebreaker: "Show me your cabbage". Introducing each other's cabbages (3 rounds: whole cabbage, half and quarter).
2. Ferment Lab introduction.
3. What are we going to do today.
4. Washing the jars.
5. Choucroute tutorial by Nathalie and start of collective documentation process (people who make drawings, gather photo and text are assigned).
6. Lunch.
7. Kimchi tutorial by Andrew (part 1).
8. Waste fermentation by Agnieszka.
9. Cleaning.

Day 2

1. Kimchi tutorial by Andrew (part 2).
2. Lunch.
3. In a search of stones expedition (passing by Karnival).
4. Washing the stones and placing them in the jars.
5. Documentation gathering.
6. Cleaning.

Reflections

- Access to the running water is crucial
- Protect all the sensitive surfaces from the red cabbage

① FULL

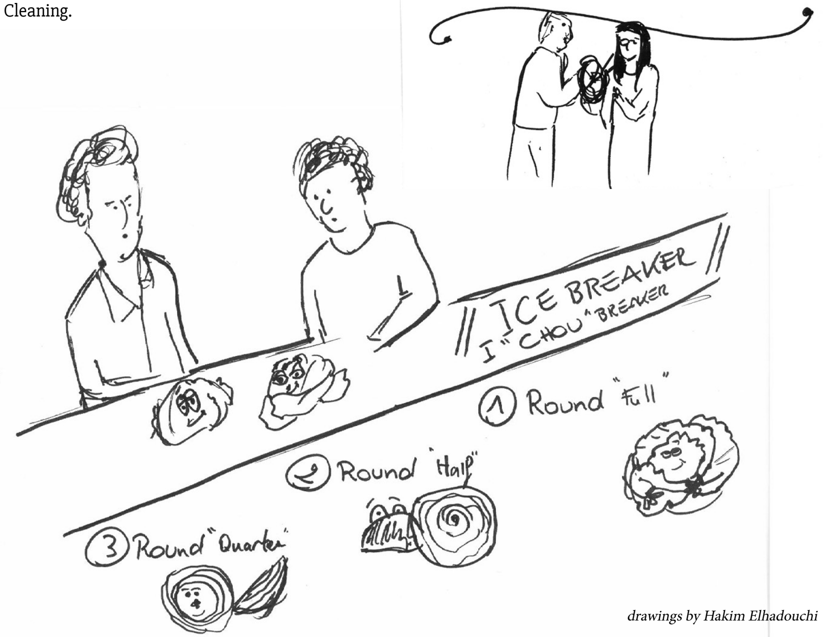
. Prendre un chou et faire une photo
. Le présenter à une personne que tu ne connais
. L'autre présente son chou
. couper le chou en 2 et faire une photo avec une

② HALF

. Poursuivre la discussion avec une autre personne
. avec la moitié de chou
. couper la ~~d~~moitié de chou en 2
- Faire une photo

③ QUARTER

. Finir l'échange avec une 3ème personne

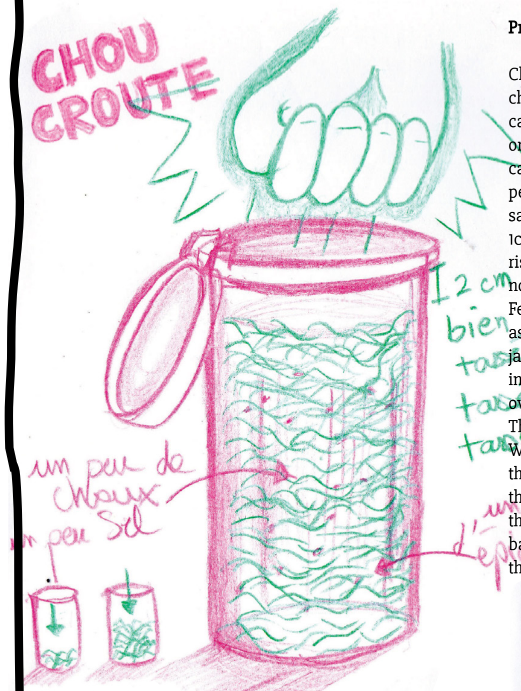


drawings by Hakim Elhadouchi

THREE RECIPES

Tools

- jar
- knife
- something to boil the water
- cloth and rubber band



drawing by Guillaume Bonnet

Notes, tips, and variations

The salt used should be non-iodised salt if possible - e.g. pickling salt, kosher salt. This is because the iodine in iodised table salt will inhibit the fermentation a little. Use what you've got, but best results will be obtained without the iodine. Add other vegetables, fruits, or spices for variations, e.g. Juniper berries, Carrot, Garlic, Cumin, Tumeric, Bay-leaves, Whole black peppercorns, Cored and sliced apple.

CHOUCROUTE RECIPE BY NATHALIE

Proposed by Nathalie. Recipe below adapted from Wikibooks 'Cookbook:Sauerkraut' [2].

Ingredients

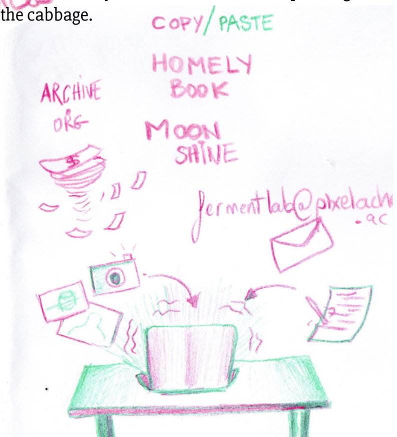
- 1 large (2.5 kg - 5 lb) fresh cabbage
- 2-3 tablespoons non-iodised salt

Process

Clean and dry a large (3 litre) preserves jar or crock, chopping board, and large bowls if needed. Quarter the cabbage and remove the core. Slice the cabbage finely or thickly, as you prefer. Optional: bruise the sliced cabbage by beating with a rolling pin or mortar and pestle. Layer the cabbage in the jar or crock, sprinkling salt in between layers. Pack tightly into the jar, leaving 1cm space at the top; don't seal the jar yet. Juice should rise to top of jar as you tightly pack the cabbage in; if not, add a little chlorine-free water.

Fermentation: Don't seal the jar while it is fermenting, as it will build up gas pressure and might break the jar. Just cover with a cloth, or cling-wrap. Set the jar in a bowl or on a plate, so that any juice that might overflow will be collected and won't make a mess.

The sauerkraut will be fermented in about a week. Wipe any excess liquid from around the jar, and put the lid on tightly before moving it to a cool place (e.g. the refrigerator) to mature. It is ready to eat after the first week, but will improve with age and as the bacteria slowly consume the more complex sugars in the cabbage.



drawing by Guillaume Bonnet

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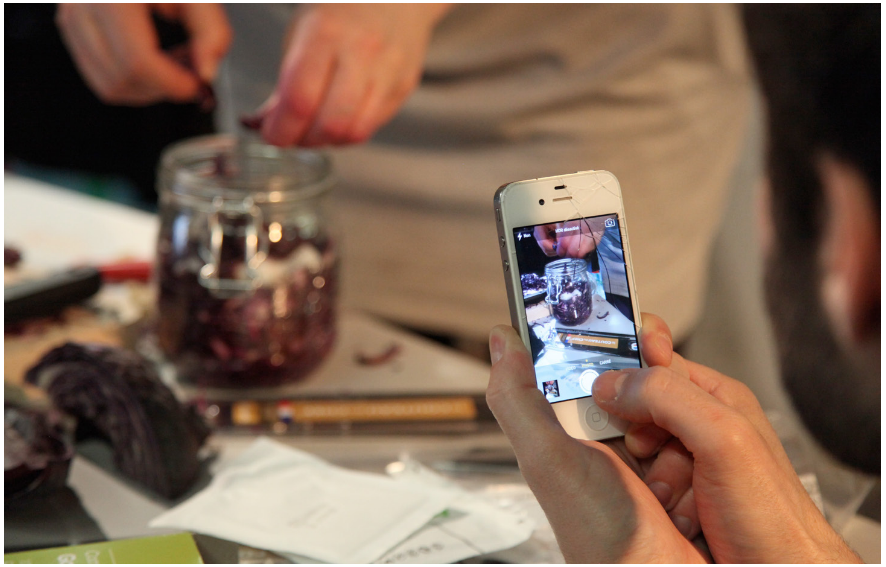
[2] *https://en.wikibooks.org/wiki/Cookbook:Sauerkraut*



KIMCHI RECIPE BY ANDREW

Additional equipment necessary to the above

A larger pot or vessel, made of plastic, ceramic or glass; a plastic/ceramic/glass plate which fits flat and reasonably tightly into the pot or vessel, with a little gap around its circumference. A weight to put on top of plate (for example another tub/jar/ that fits on the plate, weighted with something, such as filled with water or a large sanitized stone)

Ingredients (for jar of 0.9L)

- 1 full Chinese cabbage
- Garlic (4-5 cloves)
- Ginger (equal amount as chopped garlic)
- Sugar (unrefined ideally, equal amount as chopped garlic)
- Red chilli powder (as much as you feel for spicy, but at least as equal amount as chopped garlic above)
- 1 tablespoon of salt (non-iodised), granules of sea-salt are good.
- Cups of spring water (ie. without chlorine) (Note, you can use tap-water, but it is good idea to leave it open air in a container for a day or two for the often-added chlorine to evaporate. Chlorine inhibits bacterial growth)

Process

First clean and separate the leaves of the Chinese cabbage from it's heart. Throw away the outer leaves, especially if browned or damaged.

Chop up the remaining leaves into sizes you wish to have later in the Kimchi mix, and place in small batches into a larger pot or tub vessel. Sprinkle salt at regular intervals so that the salt is mixed up between the leaves as they go in. Using fists or vegetable masher, pound the cabbage leaves so that the surfaces of the stems and leaf structures are partially broken (This allows the fermentation process to start faster).

Once all parts of cabbage and salt are added, press down on whole amount so that it is packed tight and flat as possible. Use plate to press down hard on Cabbage mass, squeezing further down, and add weight. Add Cups of water so that the cabbage is under the surface of water (note more water will come from the compressed cabbage over the process, so take this into account when choosing container that will not overflow). Leave cabbage at least 12 hours under compression.

When this time has passed, chop Garlic, Ginger, and measure out similar amounts of Sugar and appropriate amount of Red Chilli Powder.

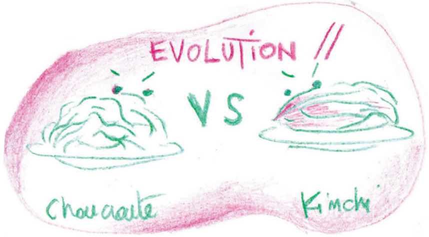
Remove weights and plate and check Cabbage has become softer, some parts becoming limp, translucent or shiny, and it is possible to smell a slight fermented odor. Before adding other flavours, check that your cabbage is not too salty to taste (if so you can rinse with more cups of prepared water), or if a bit more salt could be added. It is then time to mix in the flavourings (Garlic, Ginger, Sugar, Red Chilli powder) together with the cabbage. Make sure all is mixed thoroughly.

Again press down on whole amount so that it is packed tight and flat as possible. Use plate to press down hard on Cabbage mass, squeezing further down, and add weight. Add Cups of water so that the cabbage is under the surface of water (note more water will come from the compressed cabbage over the process, so take this into account when choosing container that will not overflow). Keep in room temperature, ideally nearer a warmer spot, such as near a radiator battery.

Leave cabbage at least 4 days under compression. (It can be left longer if desired, for weeks or months even as long as cabbage leaves are covered by liquid, to develop further blended and sour ferment taste).

When considered ready to eat, pack in jar, seal with lid and put in fridge, where the ferment process will slow to almost stop, keeping the flavour stable.

Visual document of process (using white cabbage rather than Chinese cabbage): [3]



drawing by Guillaume Bonnet

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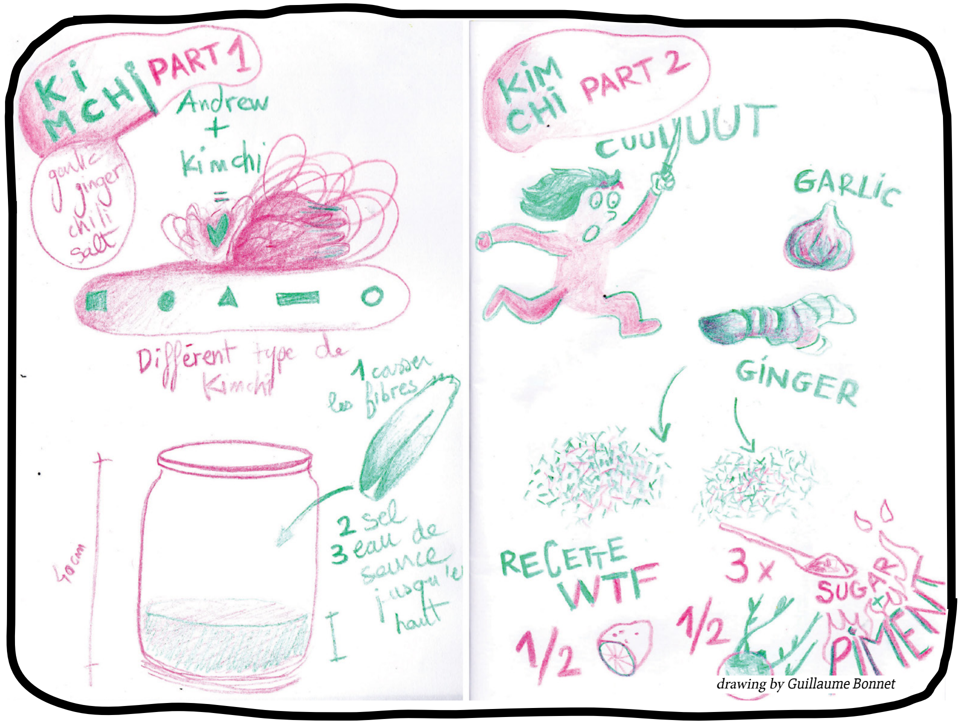
[3] *https://archive.org/details/agryfp-2017-kitchenlab-presents-kimchi*



drawing by Guillaume Bonnet

WASTE FERMENTATION RECIPE BY AGNIESZKA

Ingredients (for jar of 0.9L)

- 480g cabbage cores
- 3 fennels
- few sprigs of dill
- 1 garlic clove
- 1 tablespoon of salt
- 2 tablespoon of whey*

Process

In the bottom of the jar put fennels, dill, garlic and salt. Triangular pieces of cabbage cores cut in 3mm slices and put on the top of already placed in the jar content. Pour previously boiled but now room-temperature water mixed with whey. Close the jar and shake. Open the jar and keep in warm place for 2-3 days. After that time check regularly how much fermented are the cores and relocate it to the fridge when ready.

***How to make whey?**

Whey is the liquid remaining after milk has been curdled and strained (similar to indian panir). If you don't have an old milk you can mimic that process by following the below steps.

Ingredients

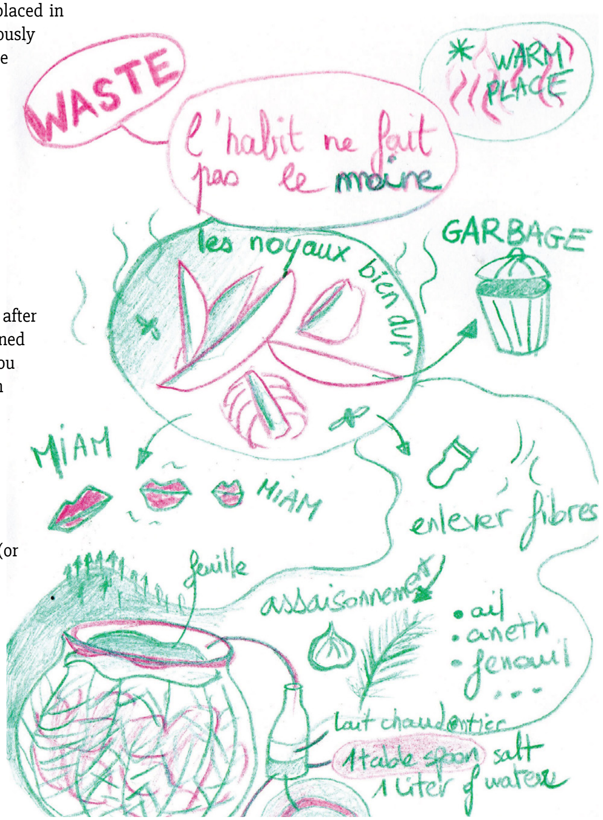
- 250 ml of milk (or soy drink)
- half TS of lemon juice (or vinegar)

Additional tools

- pot
- spoon
- strainer or piece of cloth
- plate

Process of making whey

Boil the milk after which immediately take it away from the heat. Pour lemon juice into it and keep the pot on the low heat. Stir gently till the moment when milk splits into solid curd and liquid whey. If the whey is not clear add a bit more of the lemon juice. Strain whey from curd by using a strainer or (cheese) cloth. You can leave it like that for 1 hour, pressed by the plate so all whey goes away from the curd.



drawing by Guillaume Bonnet

WORKSHOP II
HOW DO WE MAKE FERMENT LAB TOGETHER?

Type: collaborative DIY workshops
Date and time: 4-5.03.2017, 11-18
Venue: Le Shadok
Fee: Free

CALL FOR PARTICIPANTS

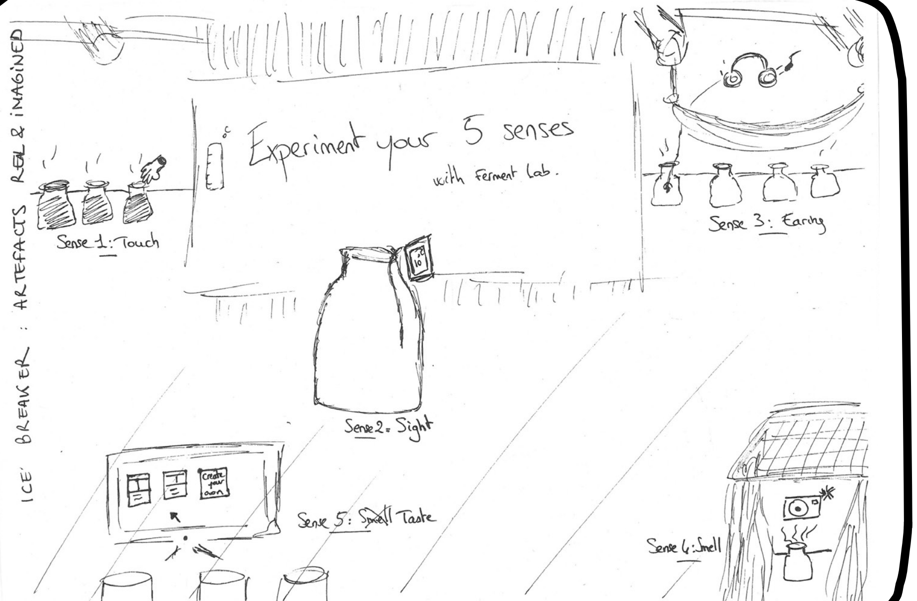
Fermentation, whether in culinary or social practice, is about creating conditions for a constant transformation to take place. In both cases, fermentation is initiated by the unremarkable meetings of mono-cellular organisms (bacteria) and/or human beings. Small actions slowly bring significant transformation, such as the taste-change of food or an evolution in the attitude of a social group. Those fermentations can keep going on continuously and be propagated by repetition and variation if treated with care and attention. Ferment Lab works at the intersection of those two fermentations: bacterial and social.

Shadok resident artists Andrew Gryf Paterson, Agnieszka Pokrywka and Nathalie Aubret invite you for a two-day participatory 'meta-workshop' on the "social" dimension of fermentation.
We will explore what it means to make Ferment Lab, and together with participants search for the essence, components, equipment and ideas for making a bioarts, art-science and food laboratory-kitchen-maker space in Shadok.

We plan expeditions to, for example, the chemistry equipment shop, farmer/producers market, urban garden. New ideas of where to go area welcome. We will also introduce various narrative practices helping to reflect on and represent our findings.

You don't have to be a fermentation enthusiast in order to participate. Anyone interested in social change, grassroots culture, participatory practices is welcome to join on the 4th and 5th March.

Let's make Ferment Lab in Strasbourg together!



drawing by Boutier Maxime

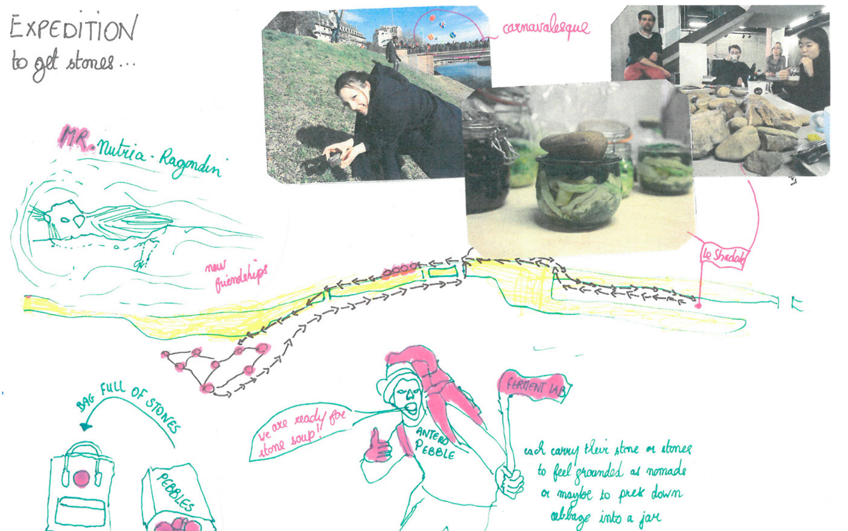


chart by Nathalie Aubret

WORKSHOP SCHEDULE

Day 1

1. Icebreaker:
   - round 1: Pick one objects from your surrounding which represents who are you and what would you like to contribute to the lab.
   - round 2: Imagine the object you would like to add to the lab and which we don't have already. [4]
2. Intro about Ferment Lab (in French).
3. Intro about workshop schedule.
4. Hands-on fermentation.
5. Lunch.
6. Expedition to Bendorff microbrewery (mission: to gather inspiration for tools and processes on the way and in the microbrewery itself).
7. Sharing the observations gathered during the expedition and tasting Bendorff beer.
8. Tasting ferments from the week before.
9. Cleaning.

Reflections

- **Attach a short list of the ingredients to each jar.**
- **Advertise the workshop on time.**
- **Inform the registered people about exact start and end of the workshop.**

Day 2

1. Tasting of the ferments from Workshop 1 by the participants of Workshop 2. The observations are gathered in the hand-made form which will become a part of the zine.
2. Preparing of the tables of contents for workshop 1 and 2.
3. Lunch.
4. Each person chooses the chapter from the table of contents he/she wants to work on.
5. Cleaning.

Reflections

- Put the printer and scanner on the spot where the workshop takes place.
- Prepare before zine making a list of content and prepare a selection of the relevant materials. Each participant after choosing his/her section should get the bunch of those materials.
- Would it be possible to try to create conditions for following up the ferments after they leave the workshop venue?
- Preparation of the feedback forms is to be considered.

---

[4] *https://archive.org/details/fermentlab-pixelache-2017-how-to-make-ferment-lab-workshop-degustation-video*

NAME: Dayoung Kimchi

FERMENTATION LENGTH:

INGREDIENTS:
Chou chinois
1càS d'ail
1càS de gingembre
1càS de sucre
½ càS de piment
1 càc de paprika

TASTE:
- arrache la bouche) amère - goût
- abrasif
- salé
- croquant
- chaux

NAME Chou-si

FERMENTATION LENGTH

INGREDIENTS
~~Chou chinois~~ / chou vert
coriandre
clous de girofle
baies de genièvre

TASTE
- attaque acide
- amère - goût d' choux
- baie de genièvre
- liquide
- frais
- parfumé
- peu fermenté, assaisonnement très agréable en bouche et équilibré

Made on 25.2.17

NAME: CHOUCROUTE SANGLANTE

FERMENTATION LENGTH

INGREDIENTS:
CHOU BLANC
(+ un peu de chou fleur et quelques gousses d'ails)
surmonté de morceaux de
BETTRAVE ROUGE

TASTE:

NAME: [redacted] Madame Bonne baleine

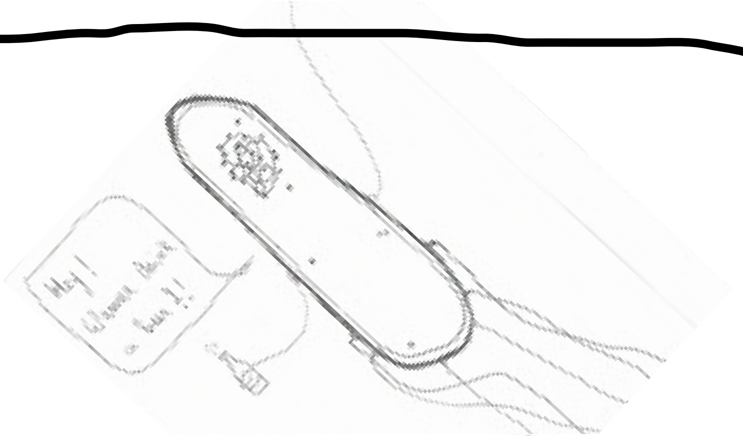
FERMENTATION LENGTH:

PICTURE

INGREDIENTS:
BEETROOT
GARLIC (FRESH)
GINGER
LAURIER
CUMIN SEED

TASTE:
who knows :-)

Taste impressions by workshops' participants


Hey! Wanna have a beer!!

Expedition to Bendorf

Qui: Stéphane et Jérôme (Bendorf [illegible]), [illegible] groupe: 6
Quoi: la [illegible] Bendorf
Où: à [illegible] (adresse)
Quand: Samedi 4 mars, [illegible]
Comment: à pieds, visite à l'improviste

drawing and text by Boutier Maxime

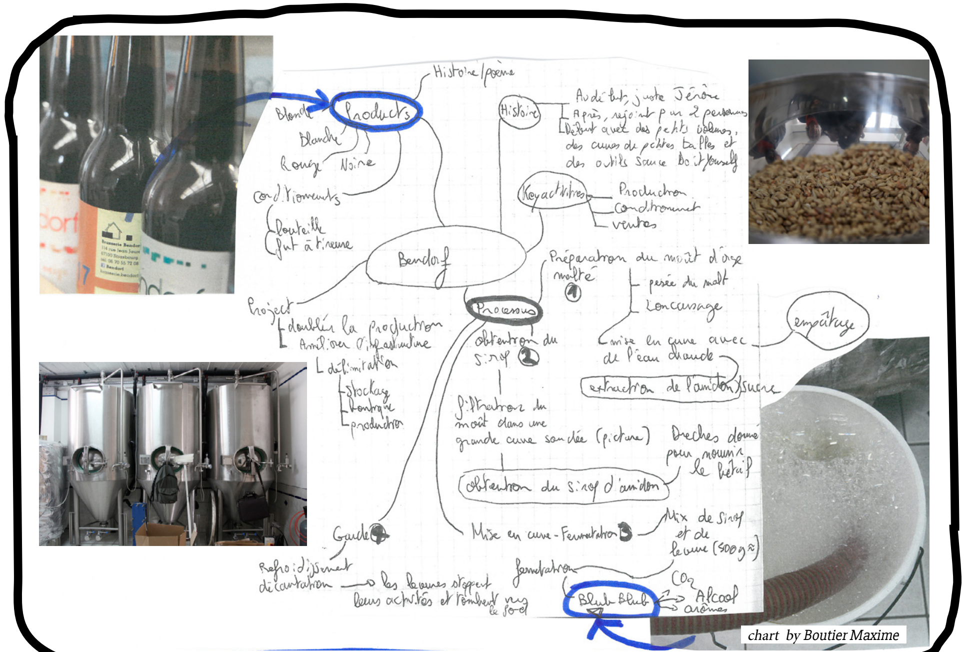

Products
Histoire/poème
Blonde
Blanche
Rouge
Noire
Conditionnements
bouteille
fut à tireuse
Histoire
Au début, juste Jérôme
Après, rejoint par 2 personnes
Début avec des petits volumes, des cuves de petites tailles et des outils sauce Do it yourself
Key activities
Production
Conditionnement
ventes
Bendorf
Project
doubler la production
Améliorer l'infrastructure
délimitation
stockage
boutique
production
Processus
Préparation du moût d'orge malté ①
pesée du malt
Concassage
mise en cuve avec de l'eau chaude
empâtage
extraction de l'amidon sucre
obtention du sirop ②
filtration du moût dans une grande cuve soudée (picture)
Drèches donné pour nourrir le bétail
obtention du sirop d'amidon
Mise en cuve - Fermentation ③
Mix de sirop et de levure (500g≈)
Garde ④
Refroidissement décantation
les levures stoppent leurs activités et tombent vers le fond
fermentation
Blub Blub
CO2
Alcool
arômes

chart by Boutier Maxime

FERMENT LAB STRASBOURG POP-UP SPACE (MARCH - JUNE 2017)

The workshops initiated Ferment Lab publically as a participatory event space, but there was also a corner of Shadok space, conveniently next to a window, which given to use as a temporary 'laboratory' display, and where we could work individually and collectively when in Strasbourg. This section of the zine describes the elements involved.

Les workshops ont établi publiquement le Ferment Lab comme un espace participatif, mais il y avait également un espace au Shadok, placé idéalement à côté d'une fenêtre, qui fut proposé avec une disposition de laboratoire temporaire, et où on pouvait travailler individuellement et collectivement quand nous étions à Strasbourg. Cette section du zine décrit les éléments concernés.

EQUIPMENT

The Ferment Lab space at Shadok consists of equipment which is easy to move, fold and transform into other uses. It includes tables, chairs, kitchen utensils and various types of containers. Many of these items are obtained for free or for affordable prices, or come from non-specialist stores (the exception are the Gärtopf ceramic crock-pots and 'Râpe à choucroute' slicers we bought online). We favour especially items which are recycled or second-hand use. This allows our laboratory to be effortlessly customized for ongoing food and social fermentation processes. Furthermore it also easy to recreate the Lab, in other circumstances, and by different people. Most likely you can find there multiple containers with fermenting and ongoing/constant change organic matter prepared during previous workshops and activities happening in this space. All the visitors are free to touch, smell jars in Ferment Lab space where suggested.

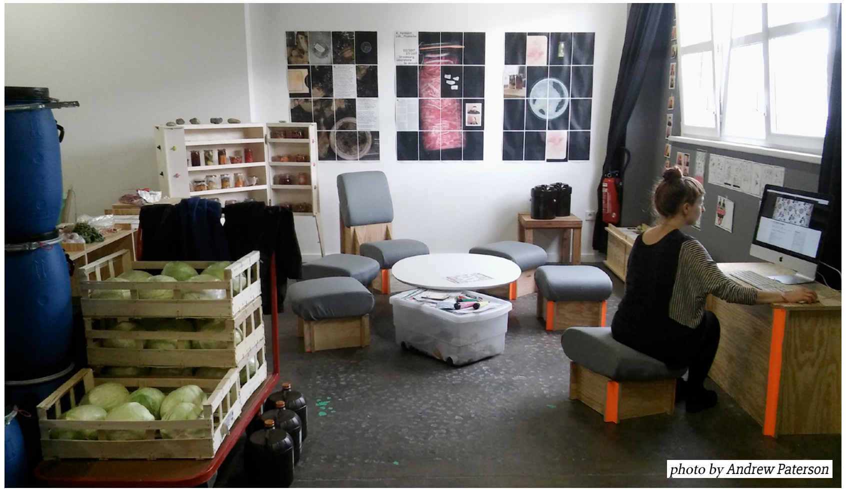


photo by Andrew Paterson

Ongoing Ferments outside cabinets

- Two brown ceramic crocks (Gärtopf) containing fermenting cabbage, which have water-seal locks, that occasionally have to be topped up with water (lids can be lifted occasionally to look in or smell).
- 1x Large 50L white tub with carrots and 2x 5L bottles containing water inside as weight-press (not to be disturbed by visitors).

Plastic+rectangular boxes on wheels

- 1x Containing organic waste for compost (to be given to AnthropoSol project by Herve Hervé Munsch).
- 1x Containing chopping boards and tools related to workshops.

Cabinet designed and produced by Hervé Munsch, AV Lab, according to commission by Ferment Lab. Painted by Andrew Gryf Paterson.

- No-glue construction, cut using CNC router in AV Fablab at Shadok.
- Contains jars and Ferment Lab equipment.
- Some can be smelled, some can be tasted.

Plastic+rectangular boxes as 'Wash-Station' on additional table.

- 1x for containing water related to washing up items.
- 1x for soaping up and storing of unclean items.

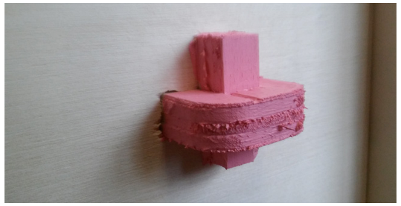
Table permanently present with cutting boards, to chop and make new ferments (outwith the workshop process).

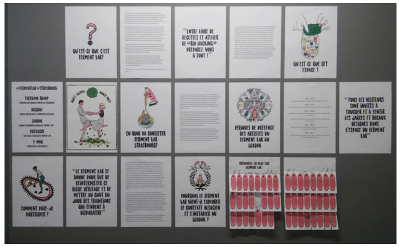
Info-board on wall by Ferment Lab group (text: Andrew Gryf Pateson, graphics: Agnieszka Pokrywka, translation: Diana Laugier).

- What is Ferment Lab (project, installation in Shadok, social partners ongoing, exhibition info, upcoming events, processes)
- What is happening and how to access additional info? How can you participate?
- Specific social media references @fermentlab #fermentlab #strasbourg
- Link to Archive.org account [5].

Table display for the parts of zine content.

- Laid out according to space, with stones holding down corners of paper (so they don't blow away, and also connecting to the aesthetic of ferment jars which contain stones).





all photos by Andrew Paterson

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[5] *https://archive.org/details/@fermentlab-pixelache*

FERMENTATION MULTIPLIERS

'Fermentation multipliers' were one of our methods to 'multiply' the number of local people hosting workshops, or offering ferments for display, in our Ferment Lab. It was successful only in an illustrative way. We encouraged contributions from Herve Munsch, a local architect, gardener and maker working at AV Fab Lab in Shadok, and Farhan, a recent immigrant from Syria involved with Makers for Change, introduced to us via NGO Alsace Terre d'Accueil.

"fermentation multipliers" "était l'une de nos méthodes pour "multiplier" le nombre d'habitants organisant des workshops, ou donnant des ferments à exposer dans notre Ferment Lab. Cela fut un succès seulement d'une manière illustrative. Nous avons encouragé les contributions d'Hervé Munsch, un architecte local, jardinier et maker travaillant avec AV Lab et le FabLab du Shadok, ainsi que celles de Farhan, un récent immigré syrien impliqué avec Makers for Change, qui nous a été présenté par l'association Alsace Terre d'Accueil.

CALL FOR FERMENTATION ENTHUSIASTS

Agnieszka, Andrew and Nathalie from the cultural project 'Ferment Lab', are looking for people who practice food fermentation as part of their daily food making.

Most people eat and drink some form of fermented food and drinks. There are also many traditions and histories of fermentation in Strasbourg and Alsace, with beer, wine, cheese and choucroute being just the most obvious ones. Ferment Lab aims at exploring and remixing this local heritage, and adding new layers to it with your help.

Maybe you make our own ferments at home, or have grown up in families where fermentation recipes were practiced. Maybe you brought to Strasbourg recipes from some other place, country or continent.

We seek fermentation practitioners for exchange and learning new ways of doing: from beginners to experts, who make a yogurt from milk, vegetable fermenters, for example who make their own choucroute or kimchi, or home craft beer brewers.

What we would like?

- to hear about your recipes, fermentation practices and the story of how you got into fermentation.
- to support a group of fermentation enthusiasts who are interested to share their ferment knowledge with others.
- Some of your time.

What we can offer?

- A venue where your fermentation experiments can be freely performed.
- A fun time with other fermenters to share and learn about other fermentation traditions.
- An opportunity to show bits and pieces of your fermentative passion results during "Strabourg, Laboratory of Tomorrow" exhibition at Le Shadok.
- A chance to publish your recipe in a small book.

FARHAN'S PICKLES

Title: Pickled stuffed peppers
Type: Spontaneous food making
Date and time: 6.10.2017, 20-21:30
Venue: private kitchen

Fermentation multipliers share the knowledge about their recipes most often in the private kitchens. One of them (and the only one during the Ferment Lab Strasbourg) was Farhan. He shared with us a Syrian recipe for pickled stuffed peppers. It was the first time when he made it while following the advices of his mother.

Ingredients

- Red or/and yellow or/and green bell pepper(s)
- Lots of peeled garlic (around 15 cloves)
- A bit of cabbage and some carrots
- 2 cups of apple vinegar
- 2 cups water
- 1 teaspoon of salt
- 1 teaspoon of sugar

Tools

- Big jar which could fit at least one whole pepper. The more peppers it can fit the better it is.
- Knife
- Bowl

Directions

1. Wash throughly the jar (the best if you pour on it some boiling water).
2. Rinse and dry the pepper(s). Remove the stem ends and seeds while leaving the pepper(s) in one piece. Cut another pepper into thin slices.
3. Cut the cabbage and carrots into stick-shaped and very thin slices. Grade/smash 5 cloves of garlic. Mix everything together with some salt, and the pepper cut previously in the bowl.
4. Pack the content of the bowl into the bell peppers) and cover the holes on top of the pepper(s) with 5 cloves of garlic.
5. Pack the peppers into a jar and pour onto it apple vinegar, water, sugar and salt. Drop the remaining garlic (5 pieces) on the top.
6. The pickles are ready to try after around one week.

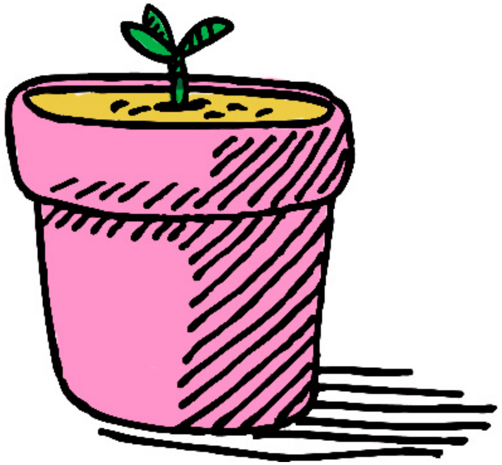
Note: Not all fermented foods are pickled and not all pickles are fermented.
Foods that are pickled are those that have been preserved in an acidic medium. The acidic medium can be created by pouring into the jar with vegetables a salt, some filtered water and optionally a starter culture. Self preserving, acidic liquid that is a by-product of the fermentation process will be produced over the time.
The acidic medium as eg. apple vinegar can be also added straight away to the jar which content you want to preserve. Vinegar, which is the product of fermentation, will peserve the jar's content, although the fermentation won't happen there.

HERVE'S WORKSHOP

Title: Fermentation and visual identity
Type: Food fermentation workshops
Date and time: 10-11.04.2017, 19-21
Venue: Fablab
Fee: Free + donation for the jar cost

The workshop by Herve Munsch connects the visual identity design and ferment making. It has two parts: ferments preparation and creation of a decorations and labels for the jar lids with a help of laser cutter.

photo by Herve Munsch



KRÜTT TREPPLE DANCE PARTY

PART III

FERMENT LAB STRASBOURG ZINE III

1. Krütt Trepple Dance Party 3
2. Invitation 4
3. What is needed to put together cabbage dance party? 4
4. Choucroute gratiut 10

Ferment Lab Zine series contain overall 5 parts:

I Ferment Lab introduction & overview
II Ferment Lab workshops, pop-up space, and multipliers
III Krütt Trepple Dance Party
IV Personal experiments in art-science
V Strasbourg Laboratoire de Demain exhibition & Reflections

The content of all zines was produced by Agnieszka Pokrywka, Andrew Gryf Paterson and Nathalie Aubret during Pixelache's artistic residency during 2017 at Le Shadok, digital-maker culture centre in Strasbourg, France. Zine 'Part 2' especially includes the work and media of workshop participants and collaborators. All parts were prepared for the different 'atlas' phases of the 'Strasbourg: Laboratoire de Demain' exhibition (10 October 2017- 21 January 2018) in the same location.

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#FERMENTLAB #STRASBOURG

Archive.org
https://archive.org/details/@fermentlab-pixelache

Shadok
www.shadok.strasbourg.eu/projets/ferment-lab/

Facebook
www.facebook.com/groups/fermentlab.strasbourg/

Pixelache
www.pixelache.ac/projects/ferment-lab

KRÜTT TREPPLE DANCE PARTY

Type: dance party during 2nd Anniv. of Shadok
Date and time: 23.04.2017, 11-16
Venue: FabCafé terrace at Le Shadok
Fee: Free

This event was our contribution to the Shadok 2nd anniversary event on the weekend 22-23rd April 2017. The idea emerged from the earlier workshop 'How to Make Ferment Lab?'. We wished to make a fun event that connected to local collective maker tradition of ferments. The Alsatian (but also other locations of agricultural heritage) tradition of crunching cabbage with the feet to make larger batches of Choucroute/ Saurkraut. We made about 100kg. The problem then was what to do with it.

Cet évènement fut notre contribution à l'anniversaire des 2 ans du Shadok, le week-end du 22 au 23 avril 2017. Cette idée émergea du workshop "Comment faire un ferment lab ?". Nous voulions faire un événement amusant autour de la tradition collective et locale des ferments. La tradition alsacienne (mais aussi d'autres endroits à fort héritage de l'agriculture) d'écraser le chou avec les pieds pour faire de plus grandes quantités de Choucroute/Saurkraut. Nous en avons fait environ 100 kilos. Le problème était ensuite quoi faire avec.

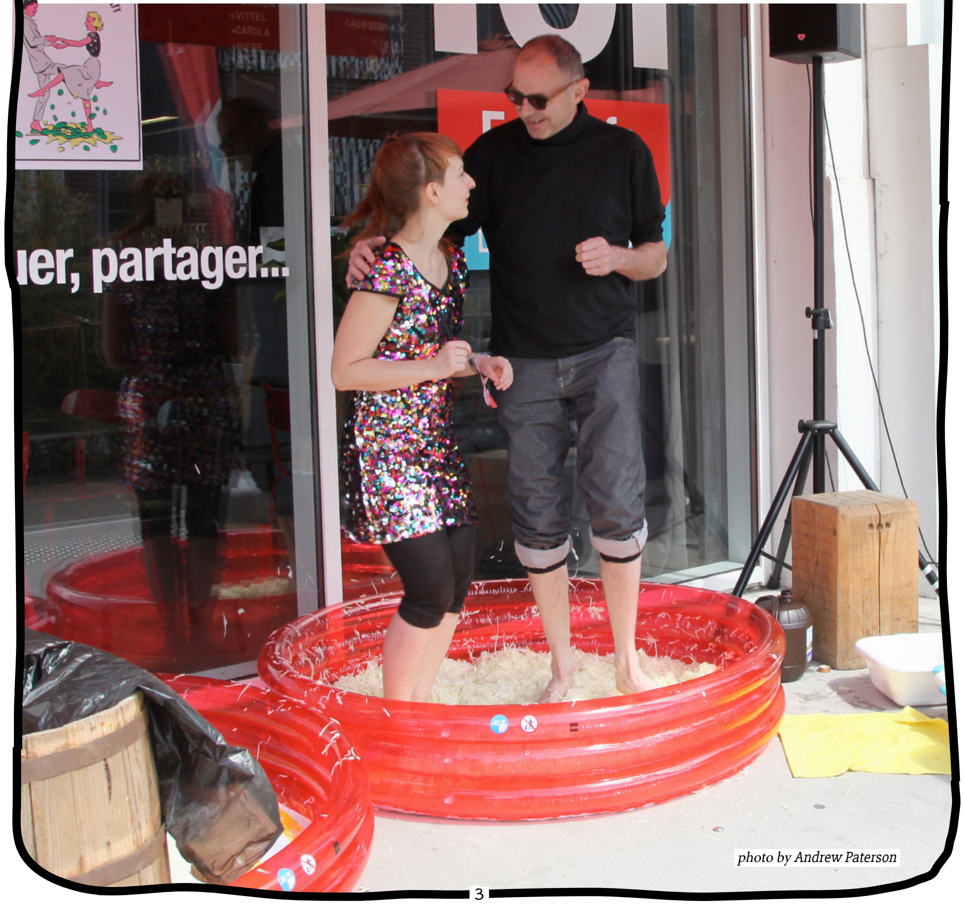

ier, partager...

photo by Andrew Paterson

INVITATION

This Shadok 2nd anniversary dance party event by Andrew Gryf Paterson and Agnieszka Pokrywka takes the communal traditions of preparing cabbage for mass-fermentation into the contemporary age for the young and old who like dancing to swing and a beat! Reserve your tub (cuve) in advance to dance with friends, or mash-up together and potentially make new ones! Choucroute is a byproduct of the party.

WHAT IS NEEDED TO PUT TOGETHER KRÜTT TREPPLE DANCE PARTY?

Dancing tubs

- 4 x Children's paddling-piscine (Ø 120-150cm)
- 4 x 25L containers
- 7 x Medium-size towels (to dry dancer's feet)
- 3 x plastic washing basins (to wash dancer's feet)
- 5L (or bigger) container/bottle for water
- 3 x large transparent plastic containers (10-30L)
- 50 x glass jars (2nd hand or recycled ideally) for individuals to take home their ferments or exhibit it in the Ferment Lab space
- projector (for workshop 2)

Cabbage-cutting equipment

- 3 hand-cut choucroute wooden slicing devices

Consumables

- 100 kg cabbage
- 5 liters of cheap wine (we got the rose one but white one is preferred)

Music

- Preferably life orchestra but we were dancing to the music played by the DJ at FabCafé.

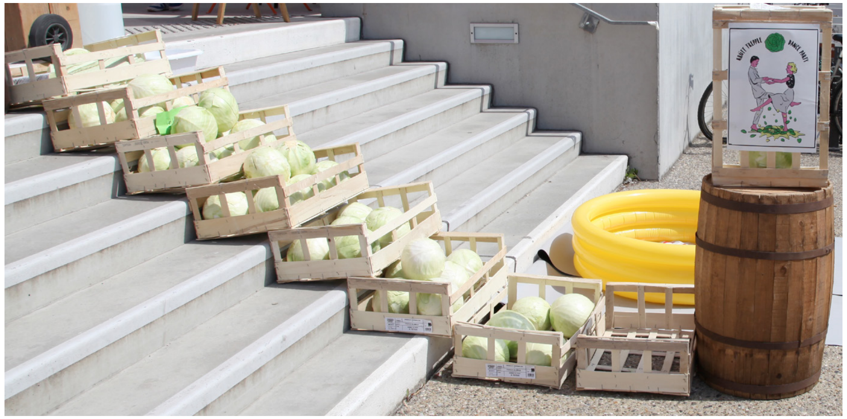
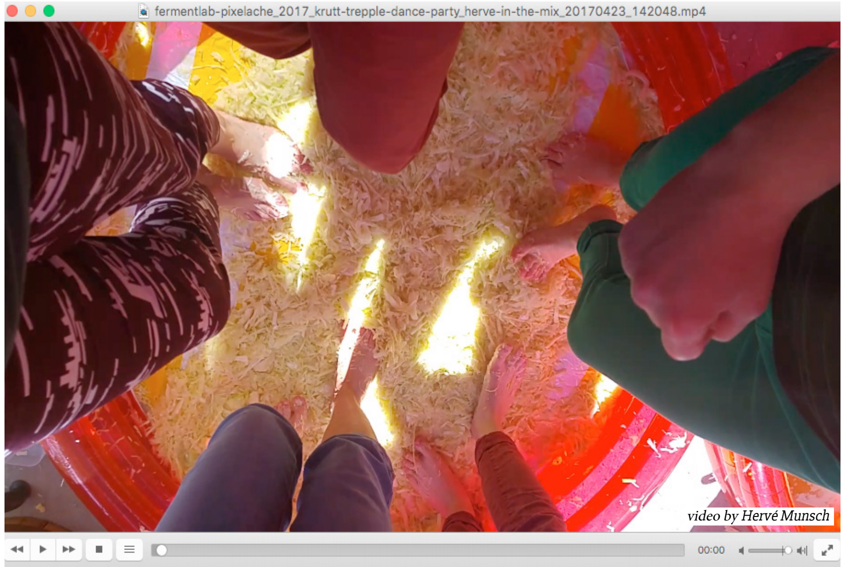


photo by Andrew Paterson

FabCafe
what do you fab?
Brunch!


fermentlab-pixelache_2017_krutt-trepple-dance-party_herve-in-the-mix_20170423_142048.mp4

video by Hervé Munsch

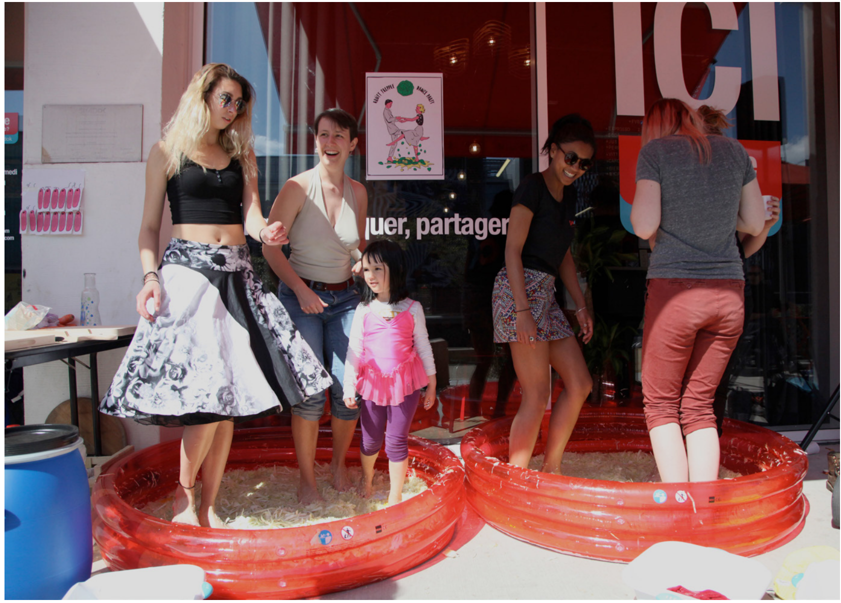


photo by Andrew Paterson

CHOUCROUTE GRATUIT

Give-away text

v.1

Ferment Lab group made approximately 100kg of Choucroute during Shadok's 2nd anniversary party. It is now ready in 3 ingredient combinations: Pure, or carrot-included, tumeric-included, or Choucroute spices. Come and take what you want. Free give away! Tell others! Plastic ziplock bags provided to take away what you want. Ferment Lab takes no responsibility for what happens except that we seek no food waste.

v.2

Meanwhile at Shadok... We have 100 kilos of Sauerkraut #FermentLab #Strasbourg. It is now ready, in 3 ingredient combinations: NATURE - CARROTS - CURCUMA - SPICES IN CHOUCROUTE. Even if it is good, we don't have permission to give it away to taste it. We offer you some alternative suggestions:

1. Rub it on a carpet, let it dry, and clean up: Brightens up colours!
2. Put it on your skin for an invigorating mask!
3. Dry it, and use it to fill an old stuffed toy
4. And think, what could do with it?
5. Take what you want, for free!

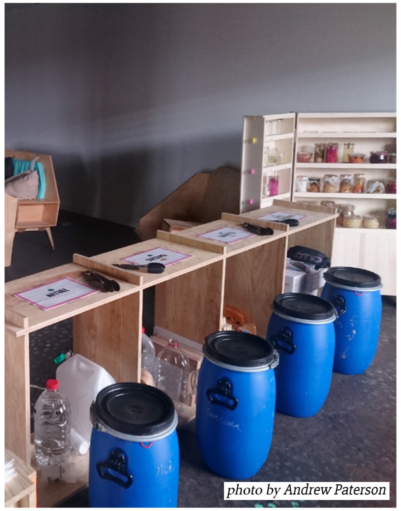


photo by Andrew Paterson

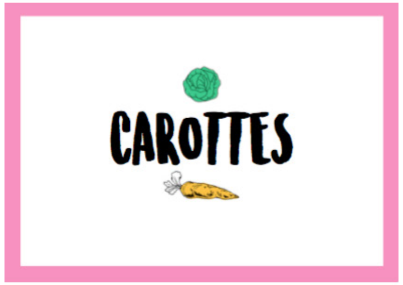
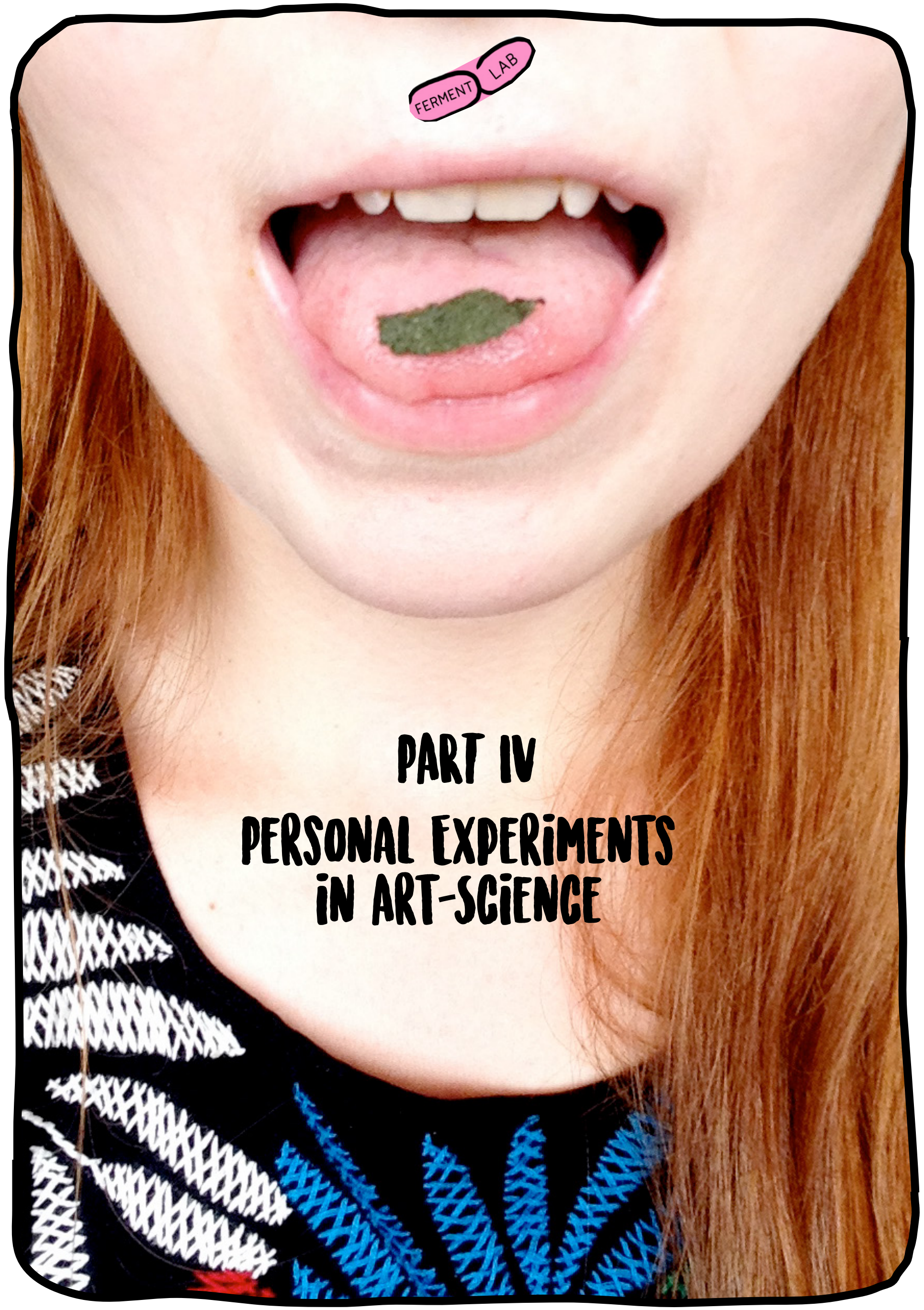


photo by Andrew Paterson

photo by Andrew Paterson



PART IV

PERSONAL EXPERIMENTS IN ART-SCIENCE

FERMENT LAB STRASBOURG ZINE IV

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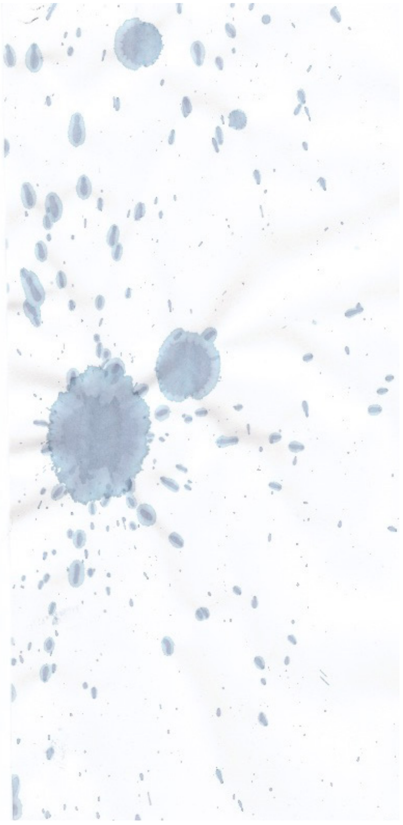
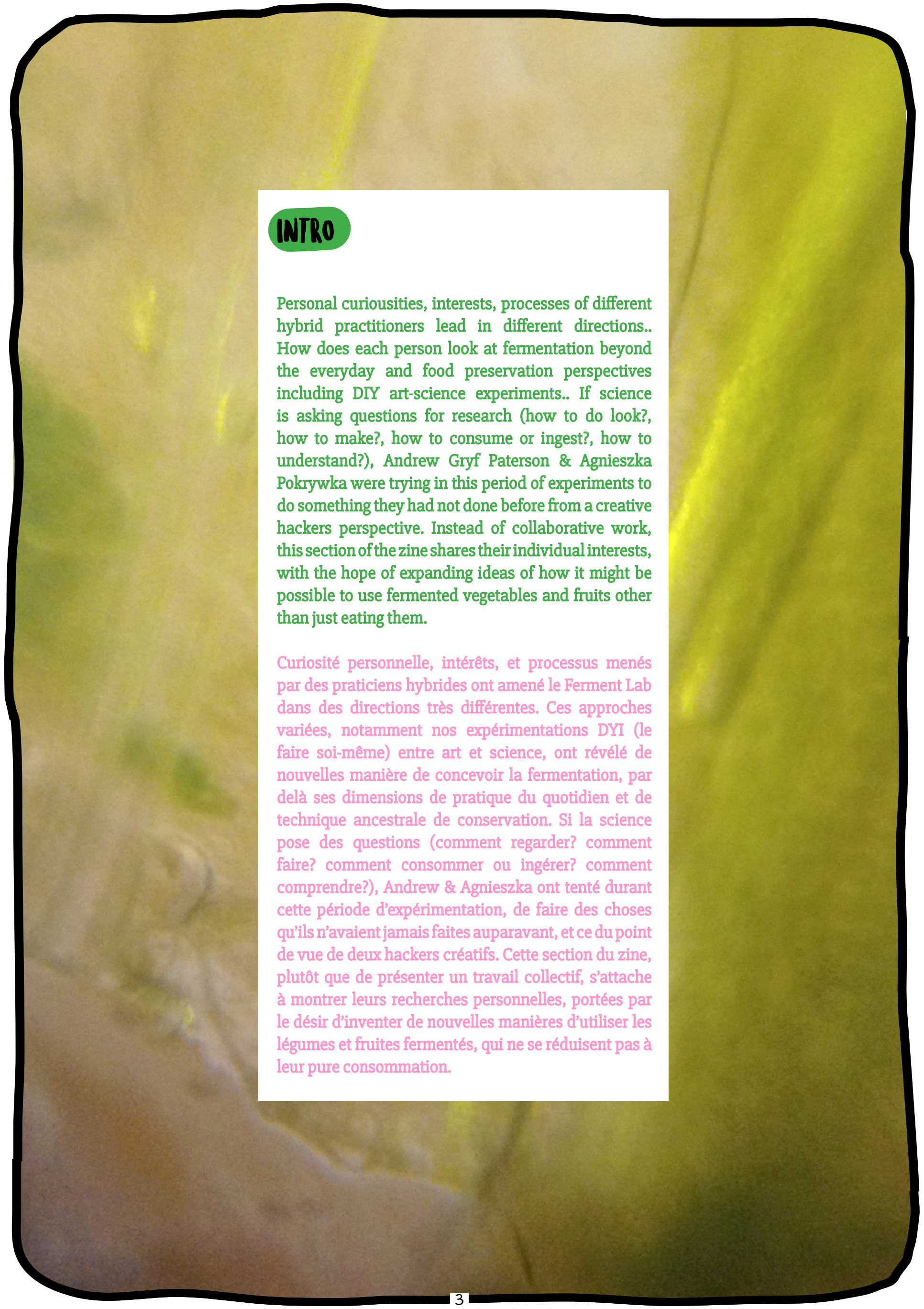
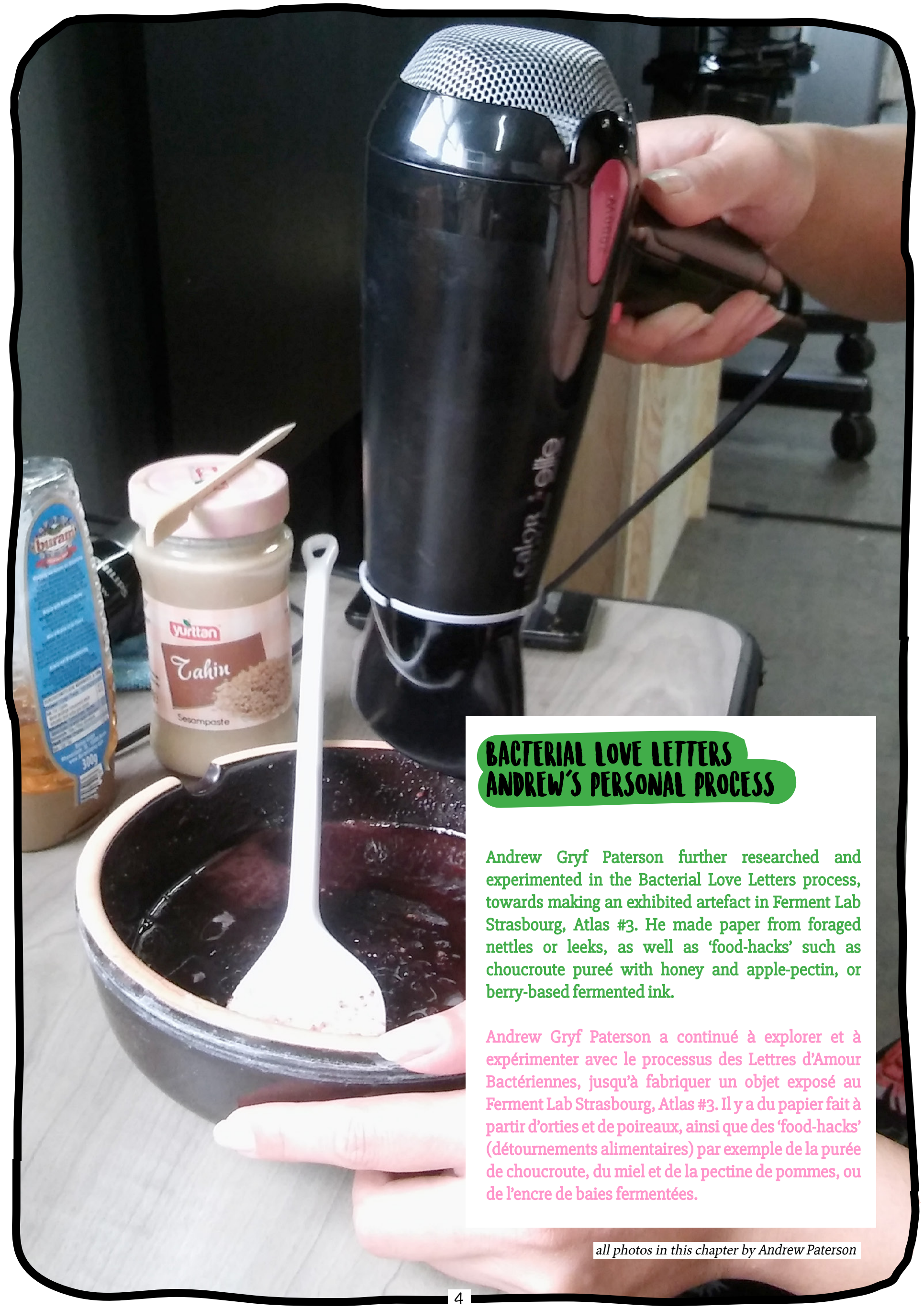




INTRO

Personal curiousities, interests, processes of different hybrid practitioners lead in different directions.. How does each person look at fermentation beyond the everyday and food preservation perspectives including DIY art-science experiments.. If science is asking questions for research (how to do look?, how to make?, how to consume or ingest?, how to understand?), Andrew Gryf Paterson & Agnieszka Pokrywka were trying in this period of experiments to do something they had not done before from a creative hackers perspective. Instead of collaborative work, this section of the zine shares their individual interests, with the hope of expanding ideas of how it might be possible to use fermented vegetables and fruits other than just eating them.

Curiosité personnelle, intérêts, et processus menés par des praticiens hybrides ont amené le Ferment Lab dans des directions très différentes. Ces approches variées, notamment nos expérimentations DYI (le faire soi-même) entre art et science, ont révélé de nouvelles manière de concevoir la fermentation, par delà ses dimensions de pratique du quotidien et de technique ancestrale de conservation. Si la science pose des questions (comment regarder? comment faire? comment consommer ou ingérer? comment comprendre?), Andrew & Agnieszka ont tenté durant cette période d'expérimentation, de faire des choses qu'ils n'avaient jamais faites auparavant, et ce du point de vue de deux hackers créatifs. Cette section du zine, plutôt que de présenter un travail collectif, s'attache à montrer leurs recherches personnelles, portées par le désir d'inventer de nouvelles manières d'utiliser les légumes et fruits fermentés, qui ne se réduisent pas à leur pure consommation.



BACTERIAL LOVE LETTERS
ANDREW'S PERSONAL PROCESS

Andrew Gryf Paterson further researched and experimented in the Bacterial Love Letters process, towards making an exhibited artefact in Ferment Lab Strasbourg, Atlas #3. He made paper from foraged nettles or leeks, as well as 'food-hacks' such as choucroute pureé with honey and apple-pectin, or berry-based fermented ink.

Andrew Gryf Paterson a continué à explorer et à expérimenter avec le processus des Lettres d'Amour Bactériennes, jusqu'à fabriquer un objet exposé au Ferment Lab Strasbourg, Atlas #3. Il y a du papier fait à partir d'orties et de poireaux, ainsi que des 'food-hacks' (détournements alimentaires) par exemple de la purée de choucroute, du miel et de la pectine de pommes, ou de l'encre de baies fermentées.

all photos in this chapter by Andrew Paterson

CALL FOR PARTICIPANTS

Type: personal process and workshop
Date and time: 28.06. - 6.07.2017, the first meeting on 28.06. at 19
Venue: Le Shadok

Imagine you send a postcard from the part of the world where you are, embedded with local culture that is beneficial for your addressee's stomach and intestines. Maybe you can even use fermented ink to print a short message. If additionally you produce the paper yourself from scratch out of locally-grown, edible materials.. That would make quite an impressive message wouldn't it?

The 'Bacterial Love Letters' process of Ferment Lab aims to connect local print-communication history of Gutenburg, late 19th century printmaking techniques, love correspondence, hybrid art/bioart practice, Illustration & science-visualization. The first meeting will help set the agenda, and get to work making the connections. We seek collaborators including local illustrators, letter-writers, open-minded 'heart-on-sleave' researchers, and good-food bacteria enthusiasts from Strasbourg and beyond!

BACKGROUND

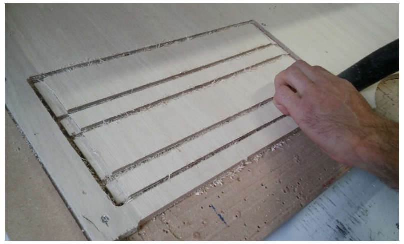
Bacterial Love Letters is an experimental project started by Paterson in collaboration with Wojtek Mejor in a workshop in Vilnius, late October 2015, hosted by the Lithuanian Interdisciplinary Artists Association. It mixed together their mutual interests in hand-made papers from foraged plant materials, fermentation, gut microbiome care, printmaking and visual communication. Paterson carried on the process independently since then, testing different elements of the project as biodegradable or ingestible artefacts.

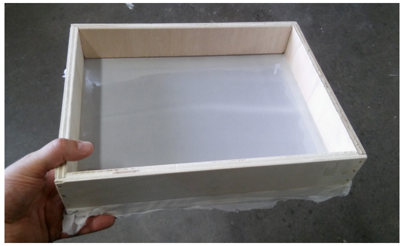
REPORT FROM STRASBOURG

Paterson's period of personal art-science experiments in Ferment Lab Strasbourg focused on Bacterial Love Letters, bringing together a curious mix of craft learning:

How to make your own paper making frames?

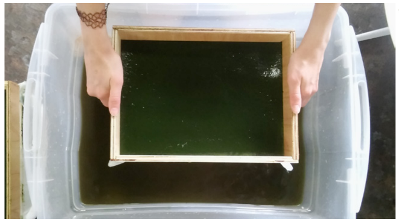
Began with training and familiarisation with the Fab Lab tools, including the laser cutter and computer controlled router, to cut wood to construct the box frames, and bought net curtains to stretch over them. How to make a screen frame which held the mesh, and a 'deckle', that holds the fibres on the screen when raised out the water-fibre mix.





How to turn local edible plants into flexible paper sheets?

Nettles (Urtica dioica) were foraged cycling around the edges of Summer parks and wastelands. These were dried out, cut up, and boiled. In the winter season, leeks (Allium ampeloprasum) were bought from the supermarket and chopped up. These plant fibres were both boiled with a spoonful of alkaline bicarbonate of soda, to help chemically break down the fibres suitably towards making them into thin paper sheets. But there were other questions to consider: How to scoop out a sheet of paper out of the basin, and how to dry it so it is not wrinkled and warped?



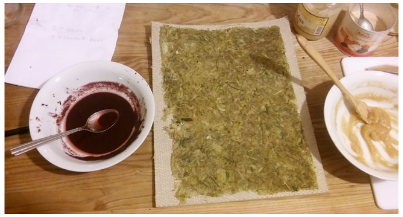
How to prototype edible ink?

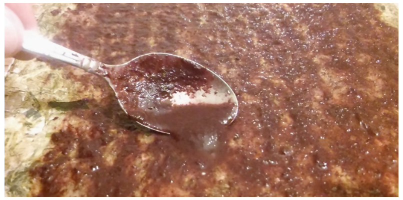
What fruit works better, Cherry (Prunus avium), Bilberry (Vaccinium myrtillus) or Aronia (Aronia melanocarpa)? Fermenting berry juices were nourished and developed, thickened and made sticky with honey with the hope of making images with them. Meanwhile, laser- or hand- cut images were tested as relief-print devices. The personal experiments in making 'inks' however didn't work out in the time available, some were too slippery or lumpy to use a roller, so an alternative creative approach of abstract expressionism was necessary.

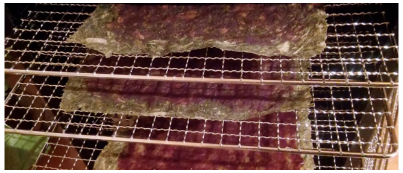
The multi- or even un-disciplinary approach of Bacterial Love Letters to making edible prints using edible ink are experimental 'food hacks', using typical foods in non-standard ways. This process included inviting others to get involved too. The workshop was advertised publicly at Shadok (see above announcement), although only 1 dedicated workshop participant joined the process over several days. However, one is enough! This person proved important and encouraging to share practical tasks and discussed different approaches towards technical solution (i.e. the making of edible paper and edible inks).

The experimental results which took place in December 2017, with the title 'Winter', are shown in the Atlas 3 exhibition contribution and in photo documentations here below in this zine. Leek (Allium ampeloprasum) was the chosen paper medium, inspired by experiments by Dutch designer Isaac Monte [1]. It was planned to use two homemade fermented ingredients, one from each of the residency locations of Paterson in 2017 - Strasbourg in France, and another from Aizpute, Latvia - so pureed Choucroute (made during the Krütt Trepple Dance Party in April in Strasbourg) and Aronia berry juice collected in September in Aizpute.

These ingredients were applied in layers to the paper, first, the Choucroute was mixed with honey and apple-pectin, and smeared over the Leek paper. Then, while the paper was laying on top of metal mesh grill sheets, the fermented aronia juice was liberally applied, pooling in the squares of the mesh. This combination was then dried in a food dehydrator at 30-35 deg Celsius, maintaining bioactive status among the ferments.







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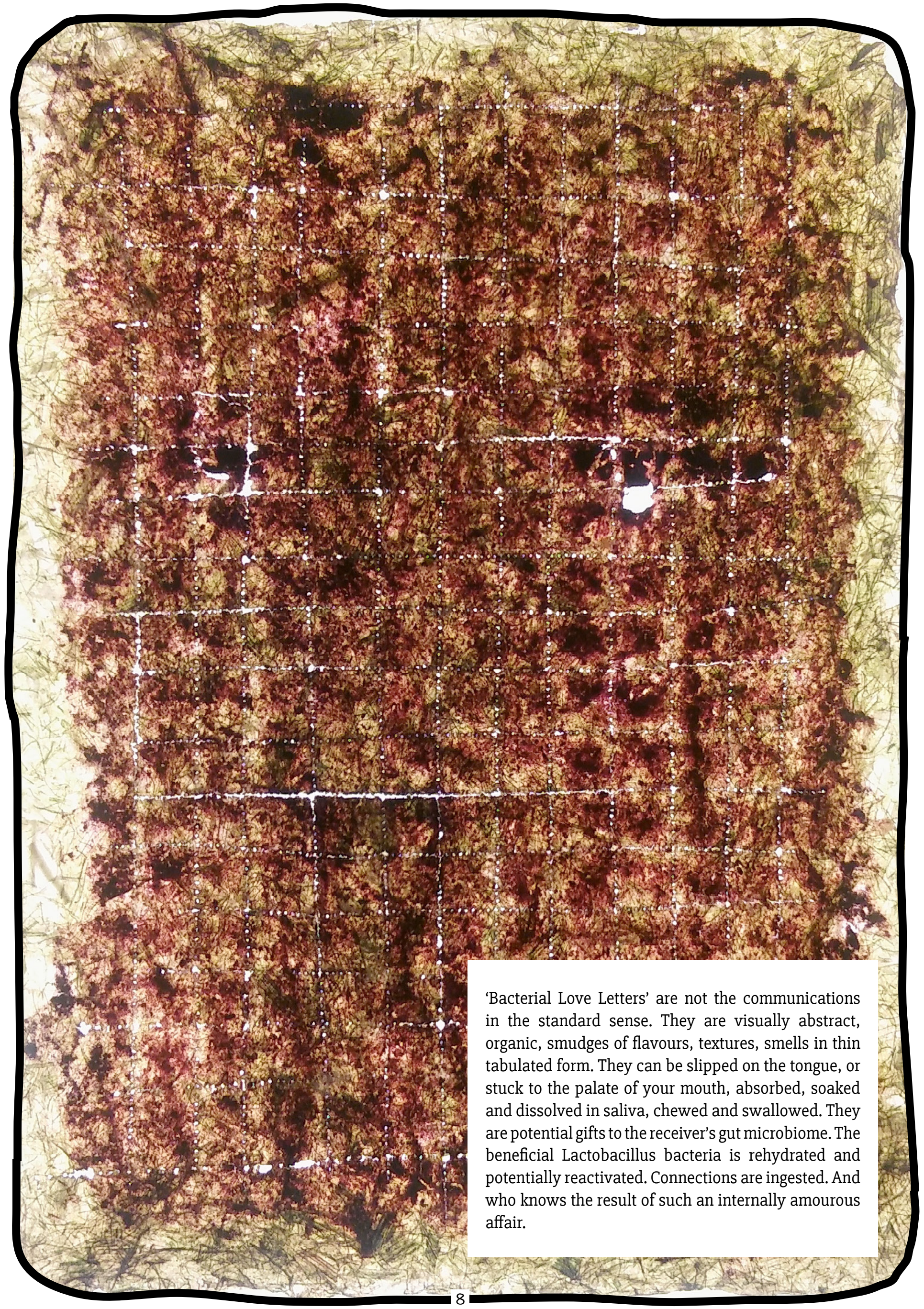
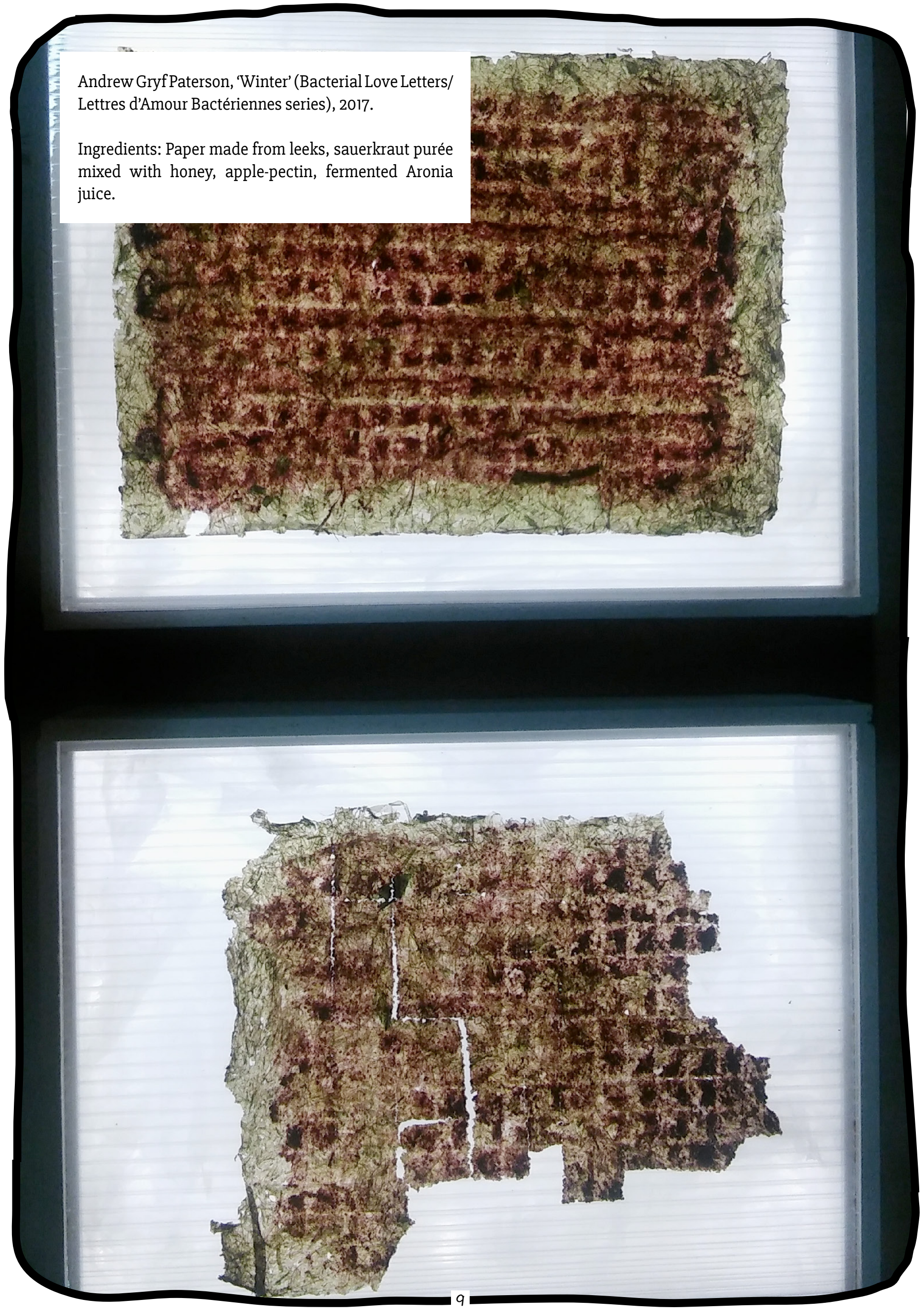
[1] *https://www.isaacmonte.nl/leek-project*



'Bacterial Love Letters' are not the communications in the standard sense. They are visually abstract, organic, smudges of flavours, textures, smells in thin tabulated form. They can be slipped on the tongue, or stuck to the palate of your mouth, absorbed, soaked and dissolved in saliva, chewed and swallowed. They are potential gifts to the receiver's gut microbiome. The beneficial Lactobacillus bacteria is rehydrated and potentially reactivated. Connections are ingested. And who knows the result of such an internally amourous affair.



Andrew Gryf Paterson, 'Winter' (Bacterial Love Letters/ Lettres d'Amour Bactériennes series), 2017.

Ingredients: Paper made from leeks, sauerkraut purée mixed with honey, apple-pectin, fermented Aronia juice.

photo by Humberto Duque

BACTERIA SENSING AGNIESZKA'S PERSONAL PROCESS

Agnieszka Pokrywka researched on various DIY, open-source solutions helping to find a reliable evidence of harmful bacterial presence in fermented foods.

The first method was focused on testing pH of fermented samples with a use of red cabbage pH test strips. That experimentation was finalized with a small open workshop on the same theme.

The second method involved turning a smartphone camera into a portable high-powered, high-quality, super-cheap microscope with the use of the 2 mm glass bead. Both methods brought two visually appealing and replicable viewpoints on fermented foods and ideas for further developments in the future.

Agnieszka Pokrywka a étudié diverses solutions DIY, open source, pour trouver une preuve fiable de présence de bactéries nocives dans la nourriture fermentée.

La première méthode était centrée sur un test du pH dans des échantillons de ferments, par l'utilisation de languettes de test de pH pour le chou rouge. Cette expérimentation fut finalisée par un petit workshop ouvert sur le même thème.

La seconde méthode fut de transformer un smartphone en un microscope portable, haute-puissance et peu cher, en utilisant un bille de verre de 2 mm.

Ces deux méthodes ont résulté en deux points de vue, visuellement attirants et réplicables, sur la nourriture fermentée, et des idées pour des développements futurs.

DIY PH TESTS OF FERMENTED MATTERS

Type: personal process and public workshop
Date and time: 10.-16.07.2017, workshop: 17.07, 13-16
Venue: Le Shadok
Fee: Free

CALL FOR PARTICIPANTS

Often we don't experiment fermenting food by ourselves, especially as a beginner, because we find it hard to judge when food is fermented, and when it is actually spoiled. We prefer to not do it at all than take risks. Irrationally it seems that we trust more the labels with expiration dates on industrially-produced food, than our own senses when examining homemade fermented foods. Is it possible to bring the judgement of food quality back within our skill-set? How can we train our senses to do so?

During a 10-days process Agnieszka Pokrywka, as a part of Ferment Lab Strasbourg, will research DIY harmful bacteria recognition techniques, in relation to homemade fermented foods. Previous findings related to this topic will be enriched with documentation from that week-long research, and summarized in the final workshop. We will attempt to put knowledge into practice, and assemble simple devices that may help us sense harmful bacteria residing in the ferments collected in Shadok's Ferment Lab. Ideally these prototypes become tools that improve our ability to judge the quality of fermented food.

photo by Humberto Duque

WORKSHOP SCHEDULE

1. Ferment lab intro

2. Making DIY pH test stripes

Ingredients and tools: red cabbage, paper, scissors, something to boil the water in, blender, strainer, alcohol, bowl or a flat tray

Instructions:

- Chop up some red cabbage and add to it some boiling water.
- Turn it into pulp with a use of a blender
- Pour the mix through a strainer and add isopropyl alcohol (optional)
- Pour the solution into a bowl.
- Soak your paper in the solution.
- When dry cut the paper into slices.

3. Basics on what is pH and pH scale

pH is a measure of the hydrogen ion concentration in a solution. It expresses the acidity or alkalinity of a solution on a logarithmic scale on which 7 is neutral, lower values are more acid and higher values more alkaline.

4. pH of fermented foods and harmful bacteria

The process of making ferments begins with an alkaline brine, usually just salt plus water with the natural juices of the vegetables . The salt kills off harmful bacteria, but salt-tolerant beneficial bacteria called Lactobacilli survive and cause fermentation to begin. During the fermentation process, the Lactobacilli convert the vegetables from an alkaline environment to an acidic one. Because of this active fermentation, the pH of recently made ferment is higher than that which has had several days or weeks to ferment.

drwings by Humberto Duque

Though pH readings is not always needed, adding pH checks to the culturing process helps to maintain proper viable and healthy culture strains/starter. Each type of starter culture will produce different amounts of acid as part of the fermentation process. Checking these levels, insure that your cultured foods and ferments are safe to consume. For the safety factor, all ferments should measure below 4.6 on the pH scale. This insures that the cultured food is free of human pathogens, safe to consume, and that the desired bacteria/yeast cultures are viable and does not become overrun by foreign yeasts or bacteria.

Detailed pH of particular ferments:

- Dairy Cultures (eg. milk kefir or yogurt starters): 4.5 or lower
- Kombucha: you should take two pH readings. The first check should be 4.5 pH or below and is done when adding the starter tea to the new batch of tea/sugar solution. The second at the end of the brewing cycle and it should be close to 3 pH
- Kimchi: 4.2 - 4.5
- Sauerkraut: at 3.0-4.0 the sauerkraut can be stored until needed. It might go down up to 4.6 or lower.
- Pickled veggies: 3.4 - 3.6

pH of harmful bacteria:

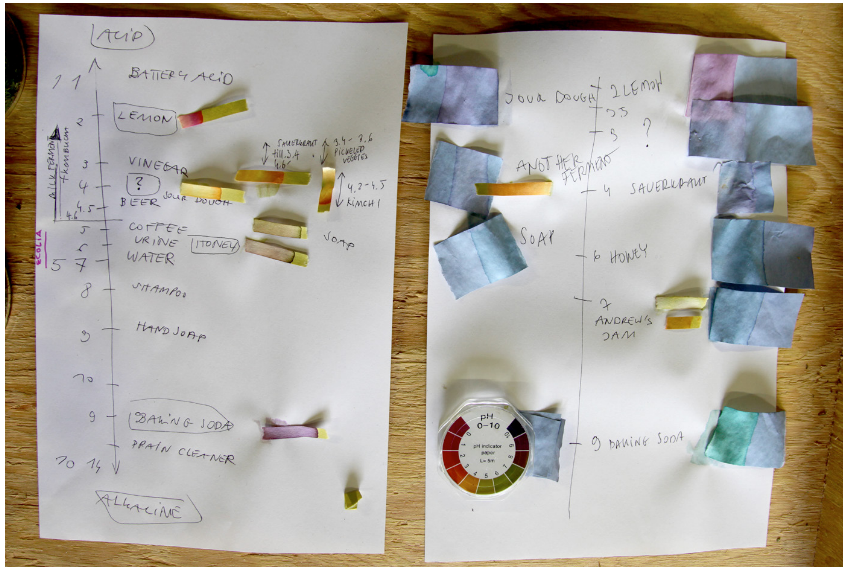
- Most bacteria: 7.0
- E. coli: 6.0-8.0

5. Calibrating DIY pH test stripes

- Choose products of various pH as lemon, tonic, vinegar, milk, dish soap, baking powder.
- Draw the ph scale axis on the middle of the piece of paper.
- Test each product both with commercial and DIY pH stripe. Do it simply by dipping the test strip into the liquid. Then with a flick of the wrist, remove any excess liquid.
- Immediately check the color appeared on commercial pH stripe against the color-coded chart. Put it next to the relevant number on the pH scale drawing. On the other site of the pH axis place the DIY stripe stained with the same product. In this way you will get a clue what color of DIY pH paper corresponds with a given number.
- Write down the pH number on each DIY stripe and keep it for the future comparisons.

6. Testing available ferments

Hint: To test the pH of sauerkraut, it is important that you first turn the dish into a slurry. You do this by combining both the sauerkraut liquid and its solids in a blender and pureeing them together. Simply immersing a pH meter or test strip in the sauerkraut liquid without first blending in the solids will not give you an accurate pH reading.



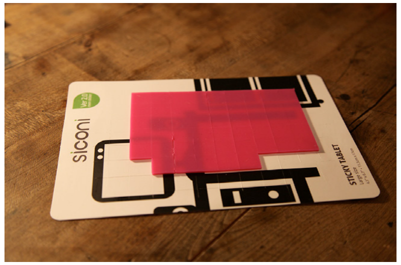
GLASS BEAD MICROSCOPY

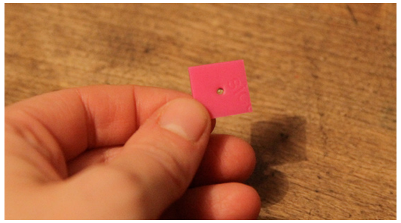
The team of scientists at Pacific Northwest National Laboratory (US) [2], came up with the 3D printed design of the clip that slips over the front-facing or back-facing camera lens of most of the cell phones and make together an inexpensive, yet powerful DIY microscope. The glass beads sizes of 3 mm, 1mm and 0.3mm can give respective magnifications of 100x (for investigation on common items like salt grains and flower petals), 350x (for identification of parasites in blood samples or protozoa in drinking water), and 1000x (for seeing the tiniest of pathogens).

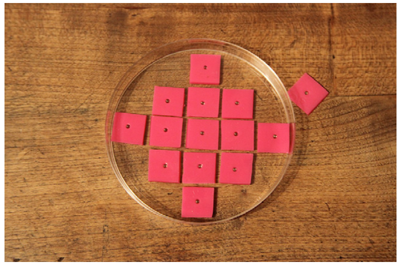
Simplified versions of glass bead microscopes were brought to the research field even earlier but this particular one became an entry point for Agnieszka's explorations. In the result she made the cost and the difficulty of assembling such a microscope even lower. She used as a lens 2mm glass beads (the same as used in laboratory distillation processes) and reusable sticky silicone pad as a lens holder. The magnification of approximately 200X was achieved. It's not yet enough to see bacteria. However it can be improved by the use of smaller glass beads in the future.

Tools:

- Glass beads (0.3mm - 3mm, for the beginners bigger beads are advised). Bigger ones are easier to become familiar with the system but give smaller magnification. The higher magnification versions are more sensitive to alignment and take more time and practice to produce good images. We can repurpose here accessible online: blasting beads for smoothing various surfaces, reflective beads for enriching paint for road markings, solid borosilicate glass beads used in the laboratory setting as distillation column packing. You can buy immense quantity of each counted in kilos.
- Silicon sticky pad. Agnieszka got hers in 2 Euro store. You can probably find one in most of the consumer electronics retailers.
- Heavy-duty leather hole punch tool (for beads 2mm or bigger, optional)
- Glass slides and plastic/glass coverslips (if you want to observe liquid samples).
- Scissors and/or craft knife.







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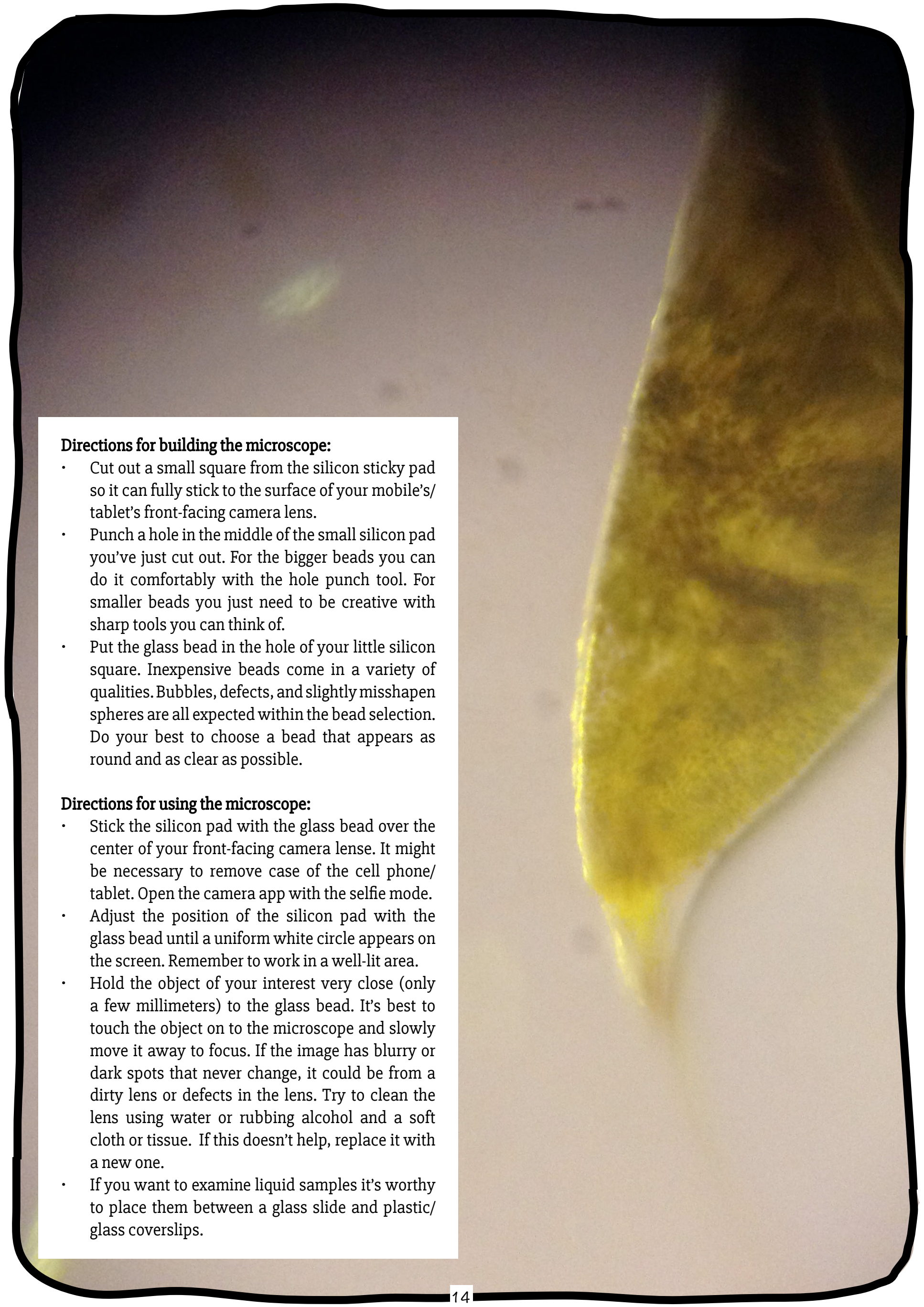
[1] *http://availabletechnologies.pnnl.gov/technology.asp?id=393*



Directions for building the microscope:

- Cut out a small square from the silicon sticky pad so it can fully stick to the surface of your mobile's/tablet's front-facing camera lens.
- Punch a hole in the middle of the small silicon pad you've just cut out. For the bigger beads you can do it comfortably with the hole punch tool. For smaller beads you just need to be creative with sharp tools you can think of.
- Put the glass bead in the hole of your little silicon square. Inexpensive beads come in a variety of qualities. Bubbles, defects, and slightly misshapen spheres are all expected within the bead selection. Do your best to choose a bead that appears as round and as clear as possible.

Directions for using the microscope:

- Stick the silicon pad with the glass bead over the center of your front-facing camera lense. It might be necessary to remove case of the cell phone/tablet. Open the camera app with the selfie mode.
- Adjust the position of the silicon pad with the glass bead until a uniform white circle appears on the screen. Remember to work in a well-lit area.
- Hold the object of your interest very close (only a few millimeters) to the glass bead. It's best to touch the object on to the microscope and slowly move it away to focus. If the image has blurry or dark spots that never change, it could be from a dirty lens or defects in the lens. Try to clean the lens using water or rubbing alcohol and a soft cloth or tissue. If this doesn't help, replace it with a new one.
- If you want to examine liquid samples it's worthy to place them between a glass slide and plastic/glass coverslips.

Agnieszka Pokrywka, ‘Hair 2’ (Bacterial Sensing, 2017)

Ingredients: Glass bead, fragment of the silicone pad, iPod, hair

PART V

STRASBOURG LABORATOIRE DE DEMAIN EXHIBITION AND REFLECTIONS

FERMENT LAB STRASBOURG ZINE V

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   (L'Élastique Relationelle)
4. Visitor comments by Maya Minder 20
   (artist-curator & fermenter based in Zürich, CH)
5. Reflections 21

Ferment Lab Zine series contain overall 5 parts:

I Ferment Lab introduction & overview
II Ferment Lab workshops, pop-up space, and multipliers
III Krütt Trepple Dance Party
IV Personal experiments in art-science
V Strasbourg Laboratoire de Demain exhibition & Reflections

The content of all zines was produced by Agnieszka Pokrywka, Andrew Gryf Paterson and Nathalie Aubret during Pixelache's artistic residency during 2017 at Le Shadok, digital-maker culture centre in Strasbourg, France. Zine 'Part 2' especially includes the work and media of workshop participants and collaborators. All parts were prepared for the different 'atlas' phases of the 'Strasbourg: Laboratoire de Demain' exhibition (10 October 2017- 21 January 2018) in the same location.

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All drawings and pictures in this zine are made by Agnieszka Pokrywka, unless indicated differently. Cover picture by Andrew Gryf Paterson.

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#FERMENTLAB #STRASBOURG

Archive.org
https://archive.org/details/@fermentlab-pixelache

Shadok
www.shadok.strasbourg.eu/projets/ferment-lab/

Facebook
www.facebook.com/groups/fermentlab.strasbourg/

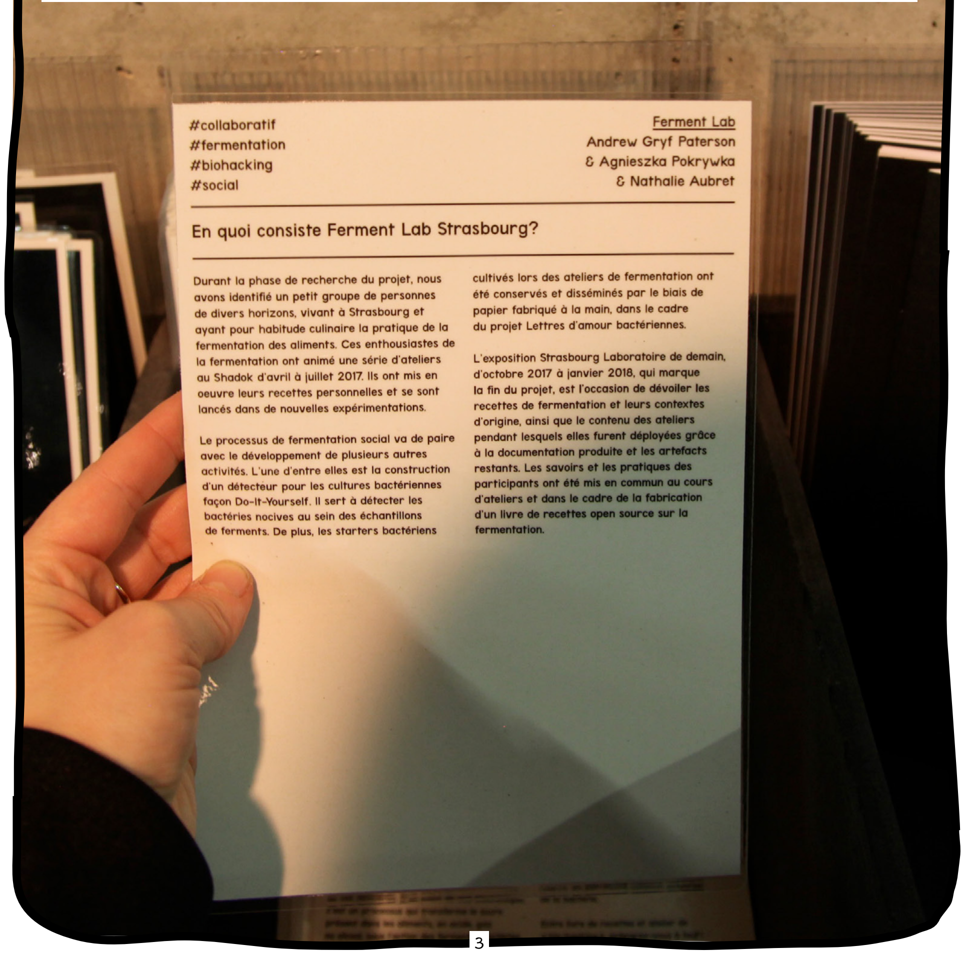
Pixelache
www.pixelache.ac/projects/ferment-lab

photo by Audrey Meyer

EXHIBITION PRODUCTION AND OVERVIEW

The Ferment Lab contribution to 'Strasbourg Laboratoire de Demain' (Strasbourg The Laboratory of Tomorrow) exhibition aimed to demonstrate as physical and graphical elements related to the various events in our residency process. The tools we used, the leftovers of our experiments. It is an example of how to present ephemeral processes that were both short and long in time, using artefacts, gallery/museum like installation, storytelling, and simple interactivity.

La contribution du Ferment Lab à l'exposition "Strasbourg, Laboratoire de Demain" fut de montrer des éléments physiques et graphiques provenant des divers évènements de notre résidence. Les outils utilisés, les restes de nos expérimentations. C'est un exemple de comment présenter des processus éphémères qui étaient courts et longs dans le temps, utilisant des objets fabriqués, des installations dans une sorte de galerie/musée, la narration, et l'interactivité simple.



#collaboratif
#fermentation
#biohacking
#social

Ferment Lab
Andrew Gryf Paterson
& Agnieszka Pokrywka
& Nathalie Aubret

En quoi consiste Ferment Lab Strasbourg?

Durant la phase de recherche du projet, nous avons identifié un petit groupe de personnes de divers horizons, vivant à Strasbourg et ayant pour habitude culinaire la pratique de la fermentation des aliments. Ces enthousiastes de la fermentation ont animé une série d'ateliers au Shadok d'avril à juillet 2017. Ils ont mis en oeuvre leurs recettes personnelles et se sont lancés dans de nouvelles expérimentations.

Le processus de fermentation social va de paire avec le développement de plusieurs autres activités. L'une d'entre elles est la construction d'un détecteur pour les cultures bactériennes façon Do-It-Yourself. Il sert à détecter les bactéries nocives au sein des échantillons de ferments. De plus, les starters bactériens cultivés lors des ateliers de fermentation ont été conservés et disséminés par le biais de papier fabriqué à la main, dans le cadre du projet Lettres d'amour bactériennes.

L'exposition Strasbourg Laboratoire de demain, d'octobre 2017 à janvier 2018, qui marque la fin du projet, est l'occasion de dévoiler les recettes de fermentation et leurs contextes d'origine, ainsi que le contenu des ateliers pendant lesquels elles furent déployées grâce à la documentation produite et les artefacts restants. Les savoirs et les pratiques des participants ont été mis en commun au cours d'ateliers et dans le cadre de la fabrication d'un livre de recettes open source sur la fermentation.

Ferment Lab was invited to contribute to the 'Strasbourg Laboratoire de Demain' exhibition that took place from 10th October 2017 to 21st January 2018. The exhibition was proposed by Géraldine Farage, co-curated by L'Élastique Relationelle (Marine Froeliger & Michel Jacquet), with Scenography by Lucie Cardinal. The exhibition was presented as follows:

'Strasbourg: Laboratoire de Demain' (Strasbourg: The Laboratory of Tomorrow) exhibition at Shadok offers a current and cultural look at the changes in our world from the point of view of artists, researchers, entrepreneurs. It's a part of a larger exhibition programme carried by the various museums of Strasbourg titled 'Laboratoire d'Europe Strasbourg, 1880-1930' (Laboratory of Europe: Strasbourg 1880-1930). The exhibitions reflect on the world we are creating, as well as on the evolutions of our ways of living.

The exhibition at Shadok took place in three parts:

1. **Atlas #1 (10 October - 10 November 2017)** Singularités plurielles (Plural Singularities): Appréhender demain à partir de regards multiples (Understanding tomorrow from multiple perspectives) *#transformation*
2. **Atlas #2 (15 November - 22 December 2017)** Pluralités d'espaces (Pluralities of spaces): Développer de nouvelles relations avec la création (Developing new relationships with creation) *#co-création*
3. **Atlas #3 (4 - 21 January 2018)** Espaces immunitaires (Immune spaces): Déployer ses propres écosystèmes (Deploying our own ecosystems) *#innovation ouverte*

Ferment Lab Strasbourg was contributing to all three parts of the exhibition, and presented evolving content according to each section theme. Some parts of the installation stayed as 'constant elements', while others changed with each 'Atlas'. Due to the length of the exhibition, it was devised by Agnieszka Pokrywka and Andrew Gryf Paterson, in conversation with the Shadok curatorial team, that Ferment Lab's dedicated space in the exhibition would be set out as an exhibit of the remainders of process. Essentially, what was left behind from the laboratory period from late February to July 2017.

Agnieszka and Andrew arrived in late September 2017 to Strasbourg to prepare the exhibition at Le Shadok. Visits to Le Château Musée Vodou de Strasbourg [1], and the Musée Zoologique [2] in particular proved to be inspiration especially related to museum display of unusual nature-based artefacts.

They assessed the leftovers of Ferment Lab: potential artefacts including remaining ferment jars full, some moldy and stinky, test pH papers, lasers, glass beads, cutting or mixing tools and chopping boards, empty crates, and other miscellaneous items. And of course, the most bulky being four barrels of rather mature choucroute! They photographed and recorded each, assessing which to display, throw away or take home with them. And then they ordered into some form of related ontologies to the Atlas themes.

---

[1] *http://www.chateau-vodou.com*
[2] *https://www.musees.strasbourg.eu/musee-zoologique*

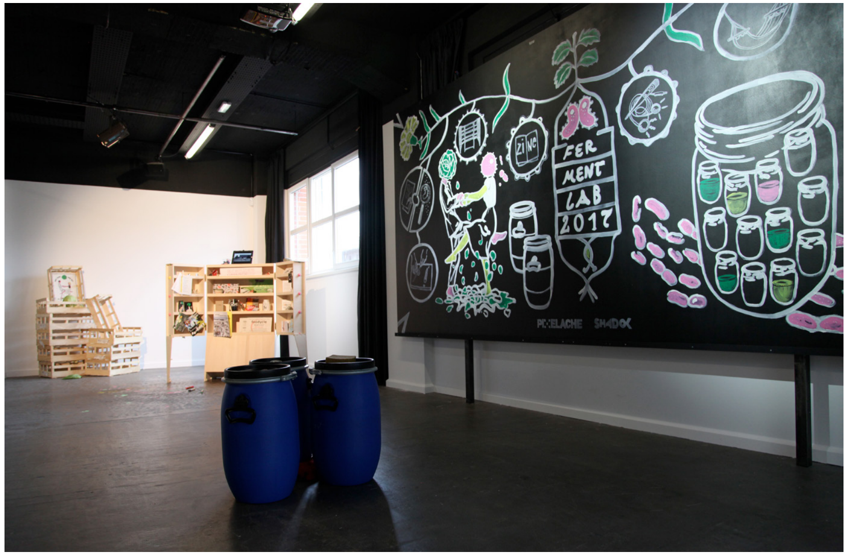
The centrepiece of the Ferment Lab Strasbourg was to be a table. Agnieszka and Andrew searched for and purchased from the local Emmaüs depot in Strasbourg [3]. They wished to find one which had a history, especially one which evokes a period such as early 20th Century, and brought some image of a 'homely' dinner table. The one they found turned out to be rather middle-class, maybe 'old German' style, with dark-stain varnish and a special marquetry diamond-shaped pattern in its centre. It was an agreeable contrast to the more minimalist contemporary concrete interior of Shadok.

On this table the selected artefacts would be placed, connected via cables and conductive thread to an interactive system via a 'Bare Conductive' microprocessor [4]. In this way visitors would be able to move around the table and learn more about each item by touching a touch-sensitive 'button', which would via headphones, play a short audio vignette (a brief evocative description, account, or episode) about the item. Nathalie Aubret provided the french-language narrative translations for the listeners. As mentioned, with each 'Atlas' shift, some items were removed from the table, and others added, creating a new tableau (arrangement) for the visitor to peruse and wonder over.

---

[3] *Emmaüs is a French homeless charity founded in 1949 to combat poverty and homelessness, which has regional depots with accept, sort and sell second-hand furniture, goods and other items. http://www.emmaus-strasbourg.fr*

[4] *https://www.bareconductive.com/*

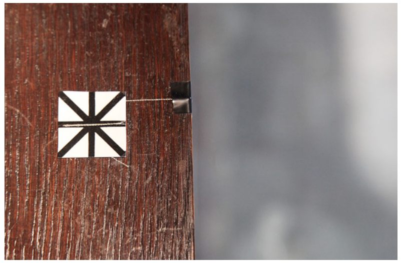


In the rest of the exhibition space allocated to Ferment Lab there were displayed larger items related to their process.

- The Cabinet made by Hervé Munsch, this time not with ferment jars, but souvenirs and mementos from earlier Pixelache Helsinki projects, such as posters, programme-booklets, postcards, pin-buttons, t-shirts, stickers etc.
- The Krütt Trepple Dance Party featured in several ways, the children's paddling-pool from the was pumped up again, and the empty cabbage crates ghosted opposite the filled blue barrels of Choucroute.
- Take-away temporary tattoos of Agnieszka Pokrywka's illustrations were always on offer for visitors, as were later printed zines.
- Finally in the last 'Atlas', another table arrived, this time white, displaying the personal art-science experiments.

During the exhibition period, in addition to the usual ad-hoc visitors, Le Shadok offered cultural mediation, guided tours for the audience, communicating and explaining the works in the exhibition. These have been guided tours to various visitors both arranged and by registration. This included high school classes, college classes, families, cultural workers, professionals of the town planning, school of communication, local associations. Although there are no figures covering the whole exhibition period (the first weeks of the Atlas #1 were not recorded), between the 3rd of November and the 19th December, 2017, 138 exhibition visitors saw the exhibition during a guided tour. At the end of Atlas #3, which opened at the start of January, a further 373 visitors had seen the exhibition via the guided tour. So in addition over 500 persons were given a guided spoken introduction to Ferment Lab. According to Cédric De Zutter, one of those giving guided tours, visitors were every time caught wondering upon a 'lab' on fermentation in the middle of a digital culture centre's environment. Sensory comments such as "that smells strong" or « it stinks », when the barrels of sauerkraut were opened was no surprise!

The following sections related to the exhibition further detail the artefacts included in the Ferment Lab Strasbourg exhibition as lists related to each 'Atlas'.



Atlas #1

Atlas #2

Atlas #3

photos by Andrew Paterson

FERMENT LAB STRASBOURG EXHIBITION ARTEFACTS

CONSTANT ELEMENTS

The Ferment Lab contribution to 'Strasbourg Laboratoire de Demain' (Strasbourg Laboratory of Tomorrow) exhibition was to demonstrate as physical and graphical elements related to the various events in our residency process. The tools we used, the leftovers of our experiments. It is an example of how to present ephemeral processes that were both short and long in time, using artefacts, gallery/museum like installation, storytelling and simple interactivity.

Permanent artefacts in the Ferment Lab space:

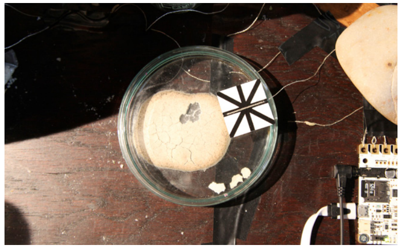
- 1 x Cabinet with content related to Pixelache, including artefacts, tablet screen showing clips related to previous festivals and related projects;
- Variable temporary tattoos with Ferment Lab graphics, facilitated with wet sponge;
- 1 x Ferment Lab mural representing history (left side) and dreams (right side) of the project with elements referring to Alsatian iconography;
- 3 x 30L blue tubs containing 3 flavours of Choucroute (Plain, Spice, Carrot).
- 1 x Second-hand, dark-stain 'old German' wooden table with diamond marquetry design.

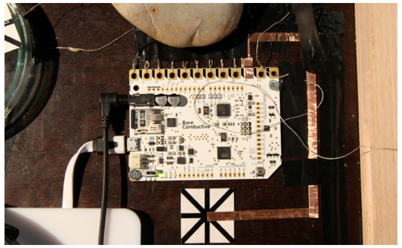
Permanent artefacts on the 'old German' table:

- 1 x Bags of sea salt;
- 1 x Collection of water containers;
- 1 x Video clip with GoPro footage from 2nd workshop;
- 2 x Long white spoons;
- 1 x Petri dish with bread starter sample inside;
- 1 x Small-size choucroute cutters;
- 2 x 'Bare Conductive' boards, crocodile-clip wires and conductive thread;
- 1 x Knife encapsulated in transparent acrylic heart;
- 1 x Jar of fermented cabbage (Choucroute Gratuit);
- 1 x Collection of paint tubes & pens (fluorescent pink, green, yellow);
- 1 x Sample sticks & stained paper (Bacterial Love Letters);
- 2 x Sets of headphones, placed on 2 x small plastic cutting boards.

Archive links:

- *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-exhibition-atlas-1-opening-agryfp*
- *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-exhibition-permanent-audio*





ATLAS #1

The first atlas contribution, within the Ferment Lab space and the various artefacts on the table, aims to introduce the diverse aspects of our process. Accompanying the 'permanent' elements and tools in our process, our table installation, the blackboard graphic mural, the cabinet, the barrels of Choucroute, there was additionally items that were the first collection of changing artefacts.

Changing artefacts on the 'old dark German' table:

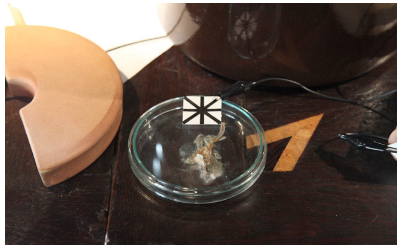
- 1 x Wooden masher (remaining through Atlas #2);
- 1 x Jar of fermented cabbage with stone (remaining through Atlas #2);
- 1 x German style fermentation crock pot (remaining through Atlas #2);
- 1 x Paper-making frame;
- 1 x Jar of fermented carrots and radish;
- 1 x Collection of 5 spice jars/bags (fennel, thyme, etc);
- 1 x Jar of ferment from Herve's workshop (acid sunrise);
- 7 x Stones;
- 2 x Farhan's pickles;
- 1 x Andrew's kimchi;
- 1 x Petri dish with mouldy cabbage sample inside;
- 1 x Bag of fair trade sugar.

Changing artefacts in the Ferment Lab space:

- 10 x Wooden crates for 6 whole cabbages (remaining through Atlas #2).

Archive links:

- *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-exhibition-atlas-1-opening-agryfp*
- *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-exhibition-atlas-1-agnieszka*
- *https://archive.org/details/fermentab-pixelache-2017-strasbourg-exhibition-atlas-1-audio*



ATLAS #2

The second atlas contribution maintains the Ferment Lab space, with the 'constant' artefacts on the table, but adds in new artefacts and documentations related to collaborative practice. In particular, the 'Krütt Trepple Dance Party' takes centre-stage with the paddling pool projection and disco-ball.

Changing artefacts on the 'old dark German' table:

- 1 x Wooden masher (remaining from Atlas #1);
- 1 x Jar of fermented cabbage with stone (remaining from Atlas #1);
- 1 x German style fermentation crock pot (remaining from Atlas #1);
- 1 x Sponge (Bacterial Love Letters) (remaining through Atlas #3);
- 1 x Stack of chopping boards (7 wood, 5 plastic, 1 big plastic, with stains);
- 4 x Plastic tongs (Choucroute Gratuit);
- 2 x Medium-size choucroute cutters;
- 1 x Petri dish with choucroute juice sample inside;
- 1 x Jar of ferment from Herve's workshop (nuances de verts);
- 1 x Flacon of cheap wine;
- 2 x Right hands of sharp-edge protecting gloves.

Changing artefacts in the Ferment Lab space:

- 10 x Wooden crates for 6 whole cabbages (remaining from Atlas #1);
- Children's paddling pool, with projection of looped-videos of dancing & disco mirror ball.

Archive links:

- *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-exhibition-atlas-2*
- *https://archive.org/details/fermentlab-pixelache-2017-strasbourg-exhibition-atlas-2-audio*

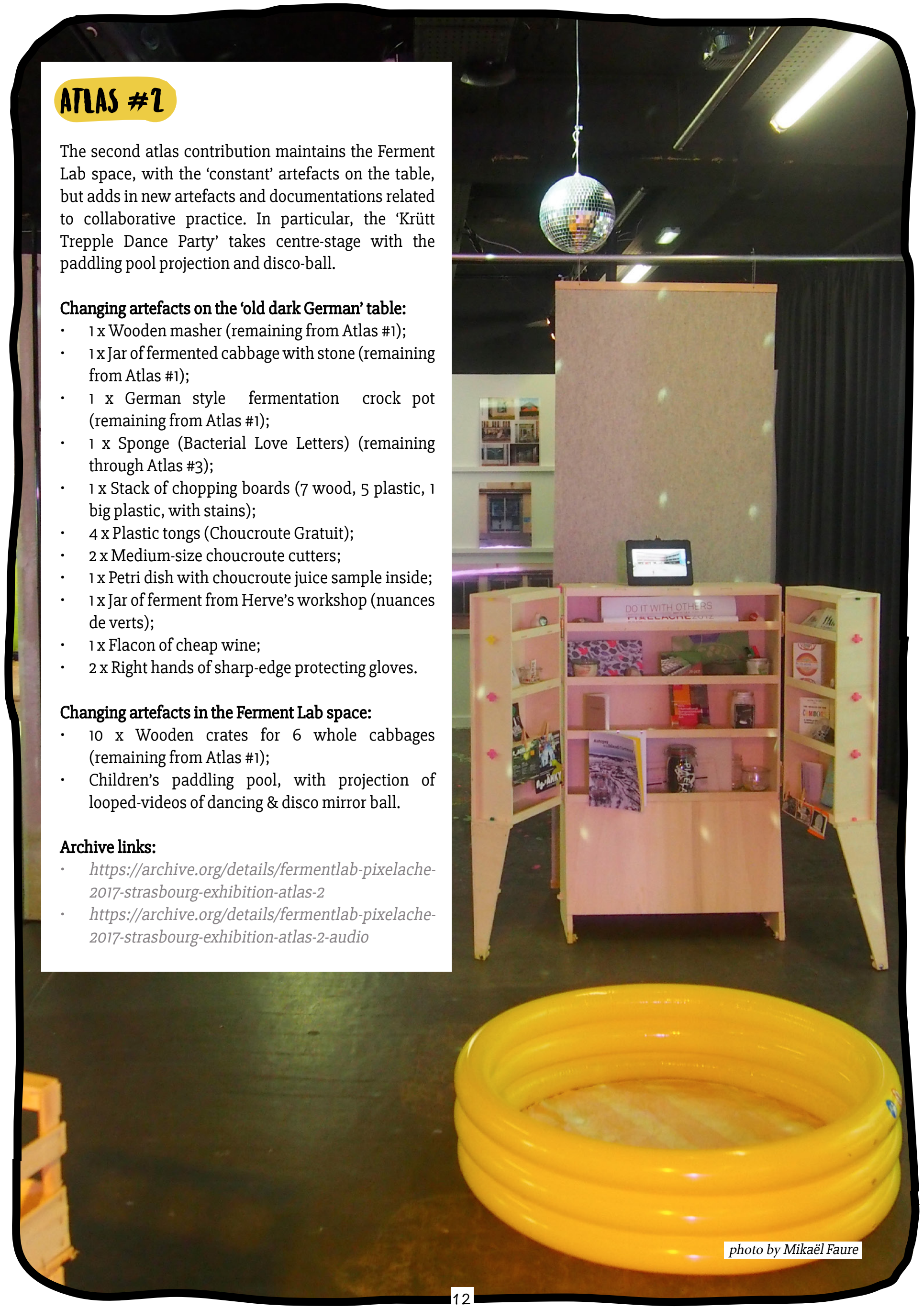


photo by Mikaël Faure

photo by Mikaël Faure

photos by Andrew Paterson

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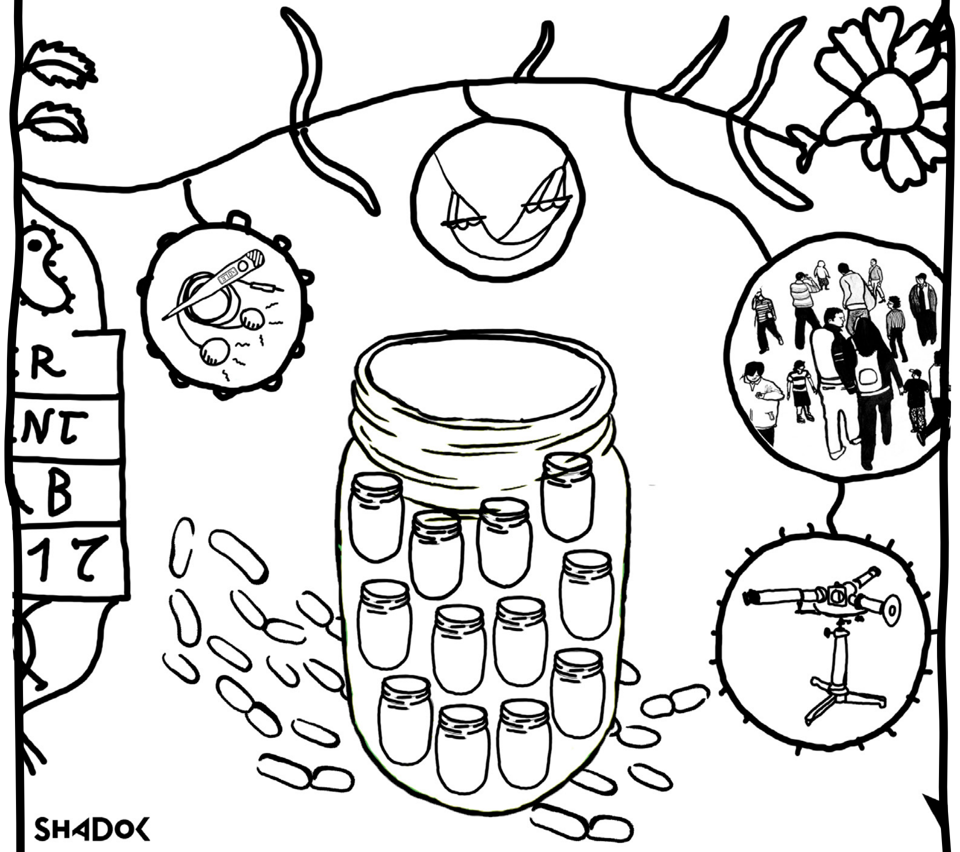


all photos of Atlas #3 by Andrew Paterson

ATLAS #3

The third atlas contribution again maintains the Ferment Lab space, with the 'constant' artefacts on the table but swaps in new art-science artefacts which relate to the experiments of Paterson and Pokrywka undertaken in June-July 2017. Respectively 'Bacterial Love Letters' and 'Bacterial Sensing'. The 'Zine also gains related section (part 4) on these processes, and joins the other first 3 parts via an wire-shelf installation installed on nearby pillar.

Changing artefacts on the 'old dark German' table:

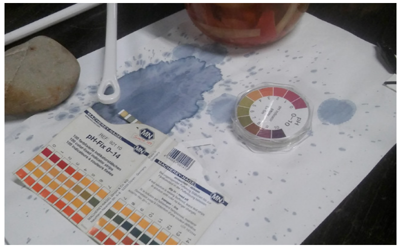
- 1 x Sponge (Bacterial Love Letters) (remaining from Atlas #2);
- 1 x Jar of ferment from Herve's workshop (with laser cut feature);
- 2 x Test laser-cut prints (Bacterial Love Letters);
- 1 x Jar of dried nettles (Bacterial Love Letters);
- 1 x Paper-making frame with paper sheet and stone (Bacterial Love Letters);
- 1 x Mini laser set (Bacteria sensing);
- 1 x Jar of ferment from cherries (Bacterial Love Letters);
- 1 x Petri dish of glass beads (Bacteria sensing);
- 1 x Bag of sauerkraut chips from Estonia;
- 1 x Tub of bicarbonate of soda;
- 2 x pH paper experiments (Bacteria sensing);
- 1 x Printing ink roller (Bacterial Love Letters).

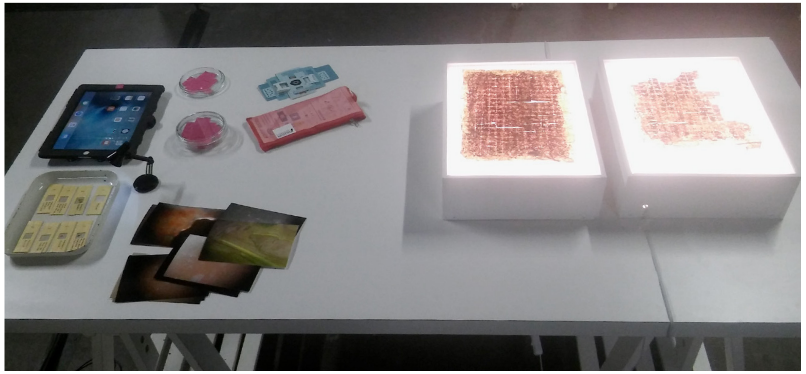
Changing artefacts in the Ferment Lab space:

- 1 x IKEA-style bench table, containing artefacts related to personal art-science experiments by Paterson and Pokrywka respectively:
    - Bacterial Love Letters: 2 x light-boxes each containing 1 sheet of hand-made paper from the following the ingredients: Leeks, choucroute purée, honey, apple-pectin, fermented aronia juice;
    - Bacterial Sensing: 1 x metal tray containing 8 x small glass-encased vegetable ferment samples for microscope, 1 x adjustable mini-lamp, computer tablet, 3 x Petri-dishes of take-away glass-bead & silicone square artefact for low-cost DIY microscopy, Series of printed photographs from DIY microscope, Example copy of Foldscope project;
    - 2 x Info-sheets mounted on plastic cutting boards .
- Multiple copies of Zines part 1, 2, 3, 4 on shelves attached to concrete pillar;
- Computer displaying website *https://archive.org/details/@fermentlab-pixelache*.

Archive links:

- *https://archive.org/details/fermentlab-pixelache-2018-strasbourg-exhibition-atlas-3*
- *https://archive.org/details/fermentlab-pixelache-2018-strasbourg-exhibition-atlas-3-audio*





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this is what you had in mind? 4:48 PM ✓✓

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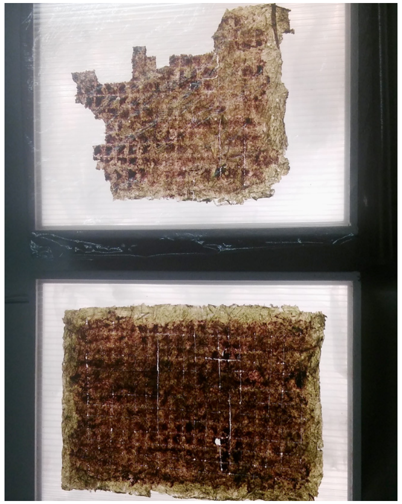


CURATORIAL COMMENTS BY MARINE FROEGILER (L'ÉLASTIQUE RELATIONELLE)

L'objetif de « Strasbourg laboratoire de demain » est avant tout exposer des futurs possibles et potentiels, singuliers, cocréatifs et systémiques à l'image du Ferment Lab (Pixelache), qui est l'excellent exemple d'innovation numérique et sociale, révélé dans un dispositif artistique libre et ouvert.

Compte tenu des principaux retours apportés par le public (lors de conversation) sur l'impact du Ferment lab, la perspective donnée dans l'espace physique et la place accordée (souhaité évolutive) dans le contenu dans l'exposition ont contribuer à transmettre la contribution et composition du biohacking dans l'innovation social et solidaire, notamment à travers son accéssilbilité et sa reproductibilité (chez soi sur sa propre table de cuisine ou de salle à manger, avec les autres).. Les notions du D.I.Y et du D.I.W.O ont ici été clairement transmissent et entenduent.

De nombreuses réactions stimulées (et stimulantes) par des appréciation et des réactions décomplexées (souhaitées ndlr) nous ont permis d'apprécier la qualité et réussite de l'installation (dans sa scénographie), de l'expérimentation sans oublier le travail de fermentation (testé et gouté durant les workshops).

Le sujet de la fermentation dans une exposition de créations et d'enjeux numériques a tout d'abord laissé le public quelque peu perplexe et dubitatif, laissant apparaître sur les visages un certain scepticisme pour très souvent et très rapidement laisser la place à l'optimisme, compte tenu et en raison de ia compréhension (totale ou partielle) d'une démarche collective et créative à renouer avec des pratiques ancestrales (au regard du contexte morose dans lequel la problématique des perturbateurs endocriniens et des répétitifs scandales alimentaires industriels sur-médiatisés vient révéler la fragilité de nos modes de vie actuels) et sociales partageant des usages et des valeurs réactualisées donc et pour ainsi dire remises « au goût du jour ». Par example, «On pourrait avoir ça au lieu de prendre des chewing gums! »

Parardoxalement, le travail à partir d'extraits naturelles de pectine de pomme, de miel, de poireau, de choucroute, transformés artisanalement par Andrew.G.Paterson en lettres d'amour bactériennes a davantage effrayé les testeurs, sans doute plus qu'il ne devrait le faire, face à l'offre de produits transformés industriellement (qui sont omniprésents sur les rayons de nos supermarchés).et qui répond au mode d'alimentation... « -Take a bit of bacteriological love letter ! - No thanks ! » Pour les visiteurs les plus curieux à goûter l' « expérimentation » et ils ont été très agréablement surpris et conquis par le délicat « goût de bonbon sentant la pomme »

VISITOR COMMENTS BY MAYA MINDER ARTIST-CURATOR AND FERMENTER BASED IN ZÜRICH, CH

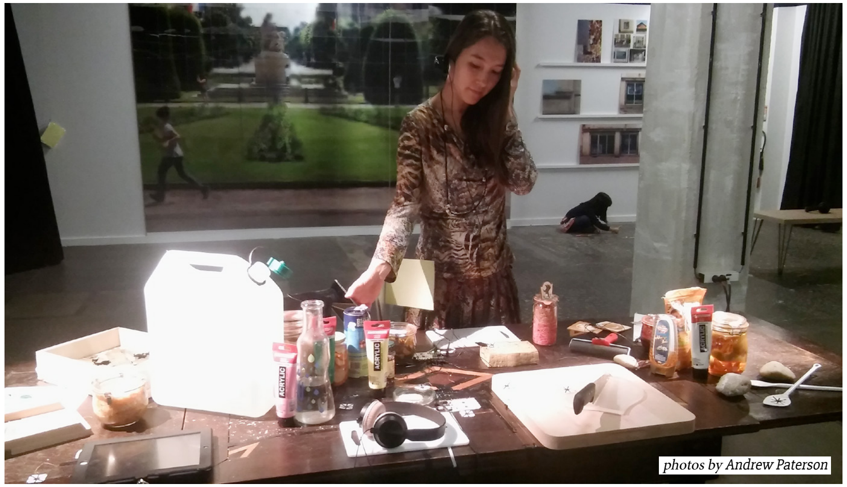
Andrew Gryf Paterson invited me last summer to visit first time Ferment Lab at Shadok, to be present when he opened the 4 big barrels, containing about 80 Kg of sauerkraut he and others processed the last spring in the Krütt Trepple Dance Party.

Like a big opening reception, we (myself, Marc Dusseiller of Hackteria and Andrew) gathered for this glorious moment of opening the sauerkraut that sat 4 months waiting at Shadok with trillions of microbes working inside the middle of the kraut. What did the change of microbes do to its taste? Has there been mold growing? What olfactory change occurred throughout the process of fermentation? A moment of great anticipation and curiosity. Fermenters united!

The sound of a popping the lid while opening a jar is one of the great pleasures of fermenters around the world. And the occasion to meet in real person amongst specialists who only knows each other via social media is rare. Once opened, the sauerkraut was incredibly tasteful and rich in flavour and depth, while the texture was tangy but still crunchy and fresh.

The way it was produced was interesting, in the ancient manner of stomping it by bare feet, washed only with cheap european wine. The benefit of this event was doubled once by a community empowering happening second by enriching the sauerkraut with the microbiome of each participant as part of donor of the starter culture and secret ingredient of wild fermentation. (Wild fermentations are Ferments that won't use inoculated starter colonies of yeast or lactobacillus produced industrially)

The task to install a ferment lab inside the digital maker exhibition space of Shadok is not easy since fermenting inside a clean designers environment means you enter this world with an underestimated profession of a cook, and secondly, using degradable biomaterial, which especially due to fermentation, has a strong olfactory feature.



photos by Andrew Paterson

REFLECTIONS

Ferment Lab Strasbourg as a 6 month residency process, a social fermentation starter, an example of local participatory bioarts or art-science experiments, and exhibition.. We reflect on our ambitions, the positives and what is not achieved.

Ferment Lab Strasbourg comme un processus de résidence de 6 mois, un démarreur de fermentation sociale, un exemple d'expérimentations bioarts ou art-science locales et participatives. Nous pesons nos ambitions, les points positifs et ce qui n'est pas encore atteint.

Ferment Lab is a participatory space for food and social fermentation and is a current active and ongoing project of Pixelache Helsinki. It's latest iteration, as international resident project at Le Shadok fabrique du numérique, Strasbourg, France, was ongoing as a production from October 2016, it's public activity since the beginning of 2017, and closed with the exhibition in January 2018. Other than the 2017 festival, Ferment Lab was one of Pixelache's largest project within that year. It aimed to offer a local (Strasbourg), regional (Alsatian-Swiss connections) and international example of process-based, site & context specific, participatory bioarts or art-science experiments, and as a cultural production.

In this last section of zine part 5, we reflect on our practice and original ambitions, both the positive and not yet achieved.

Making & Sharing Fermentation Processes

Fermentation is a natural process that humans have learned how to master. It is a crucial element to making foods and beverages in order to preserve it and enhance its taste and nutritional properties. In biochemical terms, it is a process that converts sugars present in foods, to acid, gazes or alcohol, under the action of ferments (such as bacteria, yeast, mold), most of the time in anaerobic (oxygen-deprived) conditions. In its various iterations, Ferment Lab has taken various forms in its exploration of the phenomenon of fermentation. The project involves research and experimentation into food preparation as well as into social interpretations of the concept.

Overall Ferment Lab aims to be conducted in various locations in order to collect parallel stories of food and social transformation, transplant gained recipes into other contexts and create new knowledge and meanings through experiments in social fermentation.

"The project aims to make the process shareable:
by inviting the general public to come and observe fermentative processes, both biochemical and social;
by presenting our findings in a comparative manner in the form of an open source cookbook of food and social fermentation."

The collection of 5 Zines, of which this is the last, is arguably the presentation of our experience and findings, as a 'cookbook of food and social fermentation'. As the Ferment Lab Strasbourg process has by its nature been site-specific, and many of our texts about it have been communicated in French, we decided to make an English-language zine which elaborates and opens up the project to an international reader and those who encounter the project for the first time after the exhibition is dismantled. A series of five zines have been designed and compiled by Agnieszka Pokrywka, including her own images and illustrations, as well as those of other participants, plus recipes and instructions. The first zine is an overview document, including project timeline, list of related projects, bibliography and comments on budget or work patterns. The second zine covers the participatory workshops which took place during the laboratory period; the third zine focused on media documentation from the Krütt Trepple Dance Party; while the fourth zine describes the 'personal art-science experiments' of Paterson and Pokrywka. Finally the last and fifth zine (this part) released at the end of the exhibition period, includes details about the artefacts exhibited, the ambition of the exhibition with feedback, and reflections on the whole process of Ferment Lab in Strasbourg.

As a longer term legacy and reference for the Ferment Lab, all relevant media, illustrations, documentations and texts are shared on an Internet Archive account with open creative-commons licenses, so that our work is accessible and adaptable for future inspired fermenters or commoners [5].

As a focus, it turned out that cabbage was centre-stage food example. Because it was easiest and simple, didn't require specialised equipment, and arguably was most mundane form of fermentation.

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[5] *https://archive.org/details/@fermentlab-pixelache*

photo by Andrew Paterson

The shredded fermented cabbage dish Choucroute is also a food icon of the Alsatian region known traditionally as Sürkrüt, as well as being a trans-Central European dish known as *Sauerkraut* in German or *kapusta kiszona* in Polish respectively. Considering that in Strasbourg, Alsace, we could have easily chosen also to tackle wine, beer, cheese among other foods, it was an interesting restriction to our process. With cabbage on the brain, we focused our attention on exploring alternative ways to engage this dish, including, for example, a participatory method of making it as a collaborative, performative work (Krütt Trepple Dance Party).

Developing a Community Engagement

Our process was developed openly and organically according to who has turned up to the workshops and meetings, and what followed through or not from that point onwards. Early exploratory meetings in December 2016 and January 2017, assisted by Shadok staff and by our own initiative, introduced to us a variety of persons from associations and independent designers or makers. Primarily we were interested to work with neighbourhood and special-interest food associations, as well as cultural associations focused on sharing cultural heritage, collaborative making and urban gardening. This is a reminder of our aims from the beginning:

"We see the project as an invitation into a transformative and hopefully empowering process. For this process to unfold, Ferment Lab set outs to open participatory/collective spaces for:

- *exploration, sharing and re-appropriation of heritage and know-hows, in connection with local food culture/fermentation practices;*
- *learning by doing and skill exchange around the making of our own live food;*
- *experiencing a different social time and new kinds of interactions following life cycles of fermentation;*
- *emergence of new social narratives engaging with the local food culture/fermentation;*
- *co-designing events, recipes and the final exhibition with partners & participants;*
- *initiation of new collaborations between local actors."*

In late February and early March, the work-group of Paterson, Pokrywka and Aubret hosted two DIY-DIWO-style workshops 'How to make Ferments' and 'How to make Ferment Lab'. On the first occasion, participants were given demonstrations on how to make cabbage & saline-based ferments (Kimchi, Choucroute, Waste-vegetable pickles) with a focus on making and sharing documentations in various formats. We introduced ideas of participatory documentation - that each can contribute in their own way and describe the recipe or process - and also about making a low-cost Zine together. We had hoped that this would be done together with participants, but due to lack of time in the workshop, however it ended up being an end-of-process documentation and reflection work undertaken only by Paterson & Pokrywka.

The second workshop was more 'meta', inviting the same and new participants to consider how to make a 'Ferment Lab' space which would be the public interface for the residency period. This yielded many good ideas about how to make a socially-orientated laboratory space, although only a few were realised (the Ferment Lab cabinet being one of them). Furthermore our open call for local fermenters, to 'mulitply' the activity in our space during April-June only resulted in 2 potential workshops, of which one was realised: Hervé hosting his own 'Fermentation and Visual Identity' workshop including use of fablab laser-cutter on two occasions in April 2017 (and January 2018 also).

Social fermentation is difficult without the community. Unfortunately most 'starter' discussions didn't follow through as we hoped. It is hard to assess why this was. For sure the residency period included mixed expectations from both sides of public cultural mediation from within the cultural institution of Shadok, and sometimes promotion and communications were complicated, especially with different production cycles of print, online, social media etc. Since we also lost from the production process Nathalie Aubret as our fluent French speaker and writer, from March 2017 onwards, so we didn't manage to keep as well in contact remotely with new persons, and develop relationships in advance or after visiting. There was also a pattern of people contacting Ferment Lab when the group were not present in Strasbourg, and also not being able to meet us when we were present in the city. Was this the effect of our spread-out presence in Strasbourg? Due to work commitments in Helsinki, we had to structure our residency in small bursts over the 6 month 'experimental laboratory' period from February-July. This also strongly influenced how we allocated resources and budget in the project, whereby more was spent on travels than would be the case if we stayed for 3 or even 6 months solid. Arguably the lack of consistent presence most likely affected the opportunity to develop and build up a community around Ferment Lab Strasbourg.

Likewise, a remote residency (with comings and goings every month or so) doesn't always suit to the shorter-scaled everyday practices of fermentation. We worried about our ferments going bad while we were away. Quite often on return, we had to throw out some bio-matter 'content'. However, our long process ferment - the 80 kg of Choucroute made during 'Krütt Trepple Dance Party' - fermented in barrels over the year for approximately 9 months. The ambition to give it away one month after it was made for free were hampered, but the longer term result was actually also worth it!

It would be wise to think the same about social fermentation. Speculation: Did any food entrepreneurs or activism scene come to our exhibit? University biologists, small-scale bio-industrialists or someone from the local bioethics forum? Did we inspire someone to go home & make their own? Our Facebook group at first only included a list of persons who took part in the original workshops, but gradually grew over the year, exposing the process to invited regional and international members of the European bioart scene. What is the measure of success? Maybe in the longer term, that the flavours will be mature and tasty new flavours.

In summary, social fermentation, like food ferments, needed someone on site to look after them, to check and care for the conditions for bubbling activity, top up water, check for bad mold or yeast growth, as well as enjoy the tastes and flavours when they are ripe.

The Exhibition of Ferment Process

If we were promoting the concept of social fermentation, all these activities were 'starter' encounters, where something may bubble and ferment into new actions in the future. However, there was also an expectation to present these processes in the 3-month long group exhibition 'Strasbourg: Laboratoire de Demain' (Laboratory of Tomorrow), with 3 'Atlas' stages of development.

We installed a table with permanent and changing artefacts, tools and ingredients remaining from our process, with short audio vignettes (touch-interactive via Bare Conductive system) for the audience to listen to, telling stories about the different things we did, or what we used the item for. The installation also included larger items off the table that changed with each month, sharing some media or objects or research outcomes from our processes.

One of the most enduring ideas that emerged from the 'How To Make Ferment Lab?' Workshop session was a cabinet display, which the group commissioned from local AV Lab maker Hervé Munsch to make from digital fabrication (CNC router) method. The cabinet became a permanent feature from then onwards, and various tools, documentations, and ferment jars occupied our space in Shadok until late July. It was later used in the exhibition to hold our various Pixelache memorabilia.

In regards to the personal art-science and bioart experiments that were more singular in their development, both were presented and exhibited, focusing on audience engagement and take-away experiences.

Pokrywka explored her curiosity in 'Bacterial Sensing', trying to find out ways to sense whether ferments are in a good state or not. This started in the summer with DIY pH testing, using red cabbage juice as an indicator in this common chemistry methodology. She also experimented with low-cost microscopes as a way towards seeing ferments in alternative work-home environments. Using glass beads as a magnifying tool embedded in silicone was eventually presented as a take-away experience. Paterson continued his 'Bacterial Love Letters' process, inviting locals to experiment with edible paper for foraged or vegetable matter, and inks made from fermented berries. The poetic ambition was consider communications that might be made, gifted and received, ingested for mutual benefit for human and microbiome alike. Some progress was made in preparing edible plant based paper, but ink texture was not so satisfactory, so further experiments were necessary in December also.

What does it mean for artists or even digital makers to promote traditional food practices, in what way does it deserve cultural money or why an exhibition?
Is it possible to offer different ways to think, communicate, make do with or about food, or what influences our practices related to food, or non-human collaboration (with bacteria)? Can cities with rich history and close attachment to their culture still innovate? Can they become laboratories of the future through the reinterpretation of their heritage?

According to feedback, we succeeded in telling about our process in absence, generating curiosity and strange encounters within a digital cultural centre, as well as promoting innovative cultural heritage interpretations and local food practices. Some things are so taken for granted that not often they are questioned, as well as the regulatory environments surrounding them. For example, the 80kg Choucroute we made together and tried to gift. As a public give-away it almost failed totally. We didn't manage to capitalise on the waste food, regulation, and health and safety issues,

especially with EU institutions present in the city. It is ironic that we made a workshop on using waste food, and then we produced a lot of fermented food that was then potentially to be wasted. Formal rules vs everyday DIY practices. Informal network distribution, giving by hand to friends, even in far away places saved more than half of the collectively made Choucroute from the waste dump.

Overall, it is fair to say that exhibition spaces are not actually the best spaces for fermentation exhibits. Biomatter is living and changing throughout the period. It is a challenge for cultural institutions, curators and artists likewise, to work with living biomatter over longer periods of time as a public display. In the case of Ferment Lab, there were 10 months of biological materials present which had a bit of a smell. It is no coincidence the group were given a corner of the upstairs exhibition space next to a window to make the Lab. Air quality or circulation, smell, limited access to running water, organic waste access, as well as direct direct sunlight were all challenges in Ferment Lab Strasbourg both to make some ferments, as well as also to display them in public. The wrong type of bacterias, molds, yeasts, parasites, worms and flies were all potential unwanted exhibition visitors.

Further Starters for Consideration

What do we offer for Strasbourg: Laboratory of tomorrow? According to the exhibition co-curator Michel Jacquet, the exhibition sections were made in reference to Bruno Latour's concept of an 'atlas of potentials' Our Ferment Lab Strasbourg process shared and reflected upon in this zine series, is hopefully an entry-point or gain an insight into the biggest question our work provoked "Why is Ferment Lab in Shadok?" (a digital maker cultural centre), how is it part of our future?

Bioarts and art-science is not so obvious for many people. However, fermentation practices and traditions are an authentic sharing culture, one of the oldest, at the bacterial, cellular and species-organism levels, including humans. It is in our example, where connections can be made combining ancient and new innovative approaches, to make a most progressive approach to cultural heritage. Not just preserving the past, but imagining new ways ahead in the future, doing it in the present. Hence, Ferment Lab Strasbourg at its closure, is still just a starter with potentials to find further connections. We offered familiar everyday things from the kitchen and everyday life context mixed up with the unfamiliar, strange and technical things not yet known.

We show our tools, our experiments, our results, our messes. We share our accumulated archive web-page, opening up our processes, share creative commons knowledge, recipes, media etc. You can take what is interesting, and re-make or experiement anew. You can make your own mess. You can do it yourself. You can do it with others. You can show the things that you tried and didn't work. In this way it continues.

Beyond the process of the work on the ground for Ferment Lab Strasbourg, there are larger questions we could consider:

- What is at stake in the act of fermentation and making our own bio-active, live foods?
- Can experimentation around fermentation and food hacking empower us, and is so, in what ways?
- Can reinterpretations of heritage around food practices and fermenting contribute to future thinking and actions?
- What can fermentation and its cycles teach us about life in general and about ourselves?
- Is there a relationship between food culture and local culture in general? What does it say about us?
- What could recipes for practical and social fermentation look like in the context of Strasbourg?
- Can we rethink systems of food security (eg. homogenization) and food production and reflect it in practice? When does food become non-food and when does non-food become food?
- Can food and its processes become a platform for a dialogue and collaboration between people of different disciplines, social status and cultural belonging?
- Is it possible that the homogenization of bacteria, which makes fermented food uniform, dead and static be compared to the cultural homogenization that leads to a reduction of diversity among languages, oral traditions, beliefs, and practices?

Hopefully these starter questions of Ferment Lab Strasbourg continue to encourage you to investigate further, even if the funky taste or smell is nearer than afar! We are open for new ferment hints where to go in the future, so be in touch if you wish to ferment together with us.

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Nathalie Aubret

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